OPERATION MANUAL
CLASSIC 40 and CLASSIC 60
SERIAL NUMBER FROM APRIL 2009 (0409) TO PRESENT

READ THIS MANUAL CAREFULLY FOR INSTRUCTIONS ON CORRECT
INSTALLATION AND USAGE, AND READ ALL SAFEGUARDS

SECCIÓN EN ESPAÑOL
SECTION EN FRANÇAIS
AVAILABLE AT WWW.MOVINCOOL.COM
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td>5</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>5</td>
</tr>
<tr>
<td>GENERAL WARNINGS &amp; CAUTIONS</td>
<td>5</td>
</tr>
<tr>
<td>INVENTORY &amp; ASSEMBLY</td>
<td>6</td>
</tr>
<tr>
<td>Inventory</td>
<td>6</td>
</tr>
<tr>
<td>Assembly of Exhaust Duct (For Classic 60 ONLY)</td>
<td>8</td>
</tr>
<tr>
<td>INSTALLATION</td>
<td>9</td>
</tr>
<tr>
<td>Unit Overview</td>
<td>9</td>
</tr>
<tr>
<td>Exterior Dimensions</td>
<td>10</td>
</tr>
<tr>
<td>Choosing an Installation Site</td>
<td>12</td>
</tr>
<tr>
<td>Plugging in the Unit (For Classic 40 ONLY)</td>
<td>13</td>
</tr>
<tr>
<td>Power Supply and Field Wiring Connection</td>
<td>14</td>
</tr>
<tr>
<td>Optional Accessories and Set Up Configuration</td>
<td>17</td>
</tr>
<tr>
<td>Wall Thermostat Connection (Millivolt System ONLY: Option)</td>
<td>25</td>
</tr>
<tr>
<td>Warning Signal Connection (Output Signal Terminal L+ and L-)</td>
<td>28</td>
</tr>
<tr>
<td>Fire Alarm Control Panel Connection (Input Signal Terminal E+ and E-)</td>
<td>30</td>
</tr>
<tr>
<td>OPERATION</td>
<td>32</td>
</tr>
<tr>
<td>Features</td>
<td>32</td>
</tr>
<tr>
<td>Control Panel</td>
<td>33</td>
</tr>
<tr>
<td>Operating Modes</td>
<td>35</td>
</tr>
<tr>
<td>Operating in COOL Mode</td>
<td>36</td>
</tr>
<tr>
<td>Operating in FAN ONLY Mode</td>
<td>36</td>
</tr>
<tr>
<td>Changing from FAN ONLY Mode to COOL Mode</td>
<td>36</td>
</tr>
<tr>
<td>Self-Diagnostic Codes</td>
<td>37</td>
</tr>
<tr>
<td>DAILY INSPECTION &amp; MAINTENANCE</td>
<td>38</td>
</tr>
<tr>
<td>Clean the Air Filters</td>
<td>38</td>
</tr>
<tr>
<td>Filter Removal Method</td>
<td>38</td>
</tr>
<tr>
<td>Filter Element Cleaning Method</td>
<td>38</td>
</tr>
<tr>
<td>In-Season/Off-Season Inspection &amp; Maintenance</td>
<td>39</td>
</tr>
<tr>
<td>TROUBLESHOOTING</td>
<td>41</td>
</tr>
<tr>
<td>Installation Check Sheet</td>
<td>43</td>
</tr>
<tr>
<td>TECHNICAL SPECIFICATIONS</td>
<td>44</td>
</tr>
</tbody>
</table>
FOREWORD

Congratulations on purchasing the MovinCool spot cooling system. This manual explains how to assemble, install and operate the MovinCool Classic 40, and Classic 60 spot cooling system. Please read this operation manual thoroughly to familiarize yourself with the features of the unit and to ensure years of reliable operation.

You may also find it useful to keep this operation manual on hand for reference. Components and/or procedures are subject to change without prior notice.

Definition of Terms

⚠️ **WARNING:** Describes precautions that should be observed in order to prevent injury to the user during installation or unit operation.

⚠️ **CAUTION:** Describes precautions that should be observed in order to prevent damage to the unit or its components, which may occur during installation or unit operation if sufficient care is not taken.

*Note: Provides additional information that facilitates installation or unit operation.*

**GENERAL WARNINGS & CAUTIONS**

1. All electrical work, if necessary, should only be performed by qualified electrical personnel. Repair to electrical components by non-certified technicians may result in personal injury and/or damage to the unit. All electrical components replaced must be genuine MovinCool parts, purchased from an authorized reseller.

2. Installation should be conducted by a qualified technician only. DENSO and DENSO affiliates are not responsible for injuries and/or damages caused by improper installation.

3. Never fold or place heavy objects on the power cord. This could result in damage to the power cord causing electrical shock or fire.

4. Do not place water or any other liquid on the unit. This can cause damage to the unit and increase the risk of electrical shock.

5. Do not sit or stand on the unit.

6. Do not place hands or any object in the cool air outlet or exhaust duct. Touching the fan, which is rotating at a high speed, is very hazardous.
INVENTORY & ASSEMBLY

Inventory

Classic 40

After unpacking your MovinCool unit, please check to make sure you have the following items:

1. Classic 40 MovinCool Unit (1)
2. Clip (2)
3. Grommet (2)
4. Operation Manual/Product Registration (1)

Note: If any of these items were not included in the box or appear damaged, please contact your MovinCool reseller for replacement.
INVENTORY & ASSEMBLY (cont.)

Inventory (cont.)

Classic 60

After unpacking your MovinCool unit, please check to make sure you have the following items:

1. Classic 60 MovinCool Unit (1)
2. Exhaust Duct for Condenser (1)
3. Clip (2)
4. Grommet (2)
5. Operation Manual/Product Registration (1)

Note: Power cord is not supplied with Classic 60. If any of these items were not included in the box or appear damaged, please contact your MovinCool reseller for replacement.
INVENTORY & ASSEMBLY (cont.)

Assembly of Exhaust Duct (For Classic 60 ONLY)

1. Remove the exhaust duct from the package.

2. Install the exhaust duct to the unit, using eight (8) bolts provided in the exhaust duct package.
INSTALLATION

Unit Overview

Classic 40

Classic 60
INSTALLATION (cont.)

Exterior Dimensions

Classic 40

Unit: inch
INSTALLATION (cont.)
Exterior Dimensions (cont.)
Classic 60

Unit: inch
CAUTION: Following are some precautions to consider before choosing your installation site. Please review carefully as improper installation may result in personal injury or damage to the unit.

1. Do not use the unit in areas where leakage of flammable gas may occur.
2. Do not use the unit in an environment which contains excessive amounts of corrosive gas or vapor.
3. Do not place obstacles near the air inlet and outlet. Insufficient air flow may activate the protection device or result in insufficient cooling.
4. Install the unit level with no more than 1.5 ° incline.
5. Install the unit in areas that can withstand the weight of the unit. The Classic 40 unit weighs approximately 344 lb (156 kg), and the Classic 60 unit weighs approximately 474 lb (215 kg).
6. Allow 18.0 in (457 mm) of unobstructed airflow for both the air inlets and outlets.
7. Do not use the unit at condition below 75 °F (24 °C) or above 113 °F (45 °C) 50 %RH.
8. Provide proper ventilation if the unit is installed in an enclosed area.
INSTALLATION (cont.)

Plugging in the Unit (For Classic 40 ONLY)

1. Check the prongs and surface of the power cord plug for dust/dirt. If dust and/or dirt are present, wipe off with a clean, dry cloth.

2. Check the power cord, plug and prongs for damage or excess play. If any damage or excess play is found, contact your MovinCool reseller or a qualified technician for repair.

⚠️ WARNING:

1. If the power cord or plug is damaged, repair should only be performed by qualified electrical personnel.

2. Do not connect/disconnect the power cord or attempt to operate buttons with wet hands. This could result in electrical shock.

⚠️ CAUTION: The AC outlet should be rated minimum 30 A at 220 VAC, 3 phase, 60 Hz. Do not share the outlet with any other instrument or equipment.

Note:

1. Make sure the AC outlet is free of dirt, dust, oil, water, or any other foreign matter.

2. The Classic 40 is equipped with an approved NEMA plug configuration (L15-30). The appropriate outlet must be used for this plug type.
INSTALLATION (cont.)

Power Supply and Field Wiring Connection

Power Supply for Classic 40

- AC 220 V±10 %, 3 phase and 60 Hz. Do not connect the unit to any other power supply.
- The power supply should be a dedicated single outlet circuit with a UL approved short-circuit and ground fault protective breaker with a recommended fuse size of 25 A (25A maximum).
- Securely tighten each terminal.

⚠️ **CAUTION:** Use a specified 25 A fuse. Do not use wiring, copper wire or soldering instead of the fuse. The use of non-specified fuses can cause machine failure or fire.
INSTALLATION (cont.)

Power Supply and Field Wiring Connection (cont.)

Power Supply for Classic 60

• AC 460 V±10%, 3 phase and 60 Hz. Do not connect the unit to any other power supply.

• The power supply should be a dedicated single outlet circuit with a UL approved short-circuit and ground fault protective breaker with a recommended fuse size of 20 A (20 A maximum).

• Securely tighten each terminal.

⚠️ CAUTION: Use a specified 20 A fuse. Do not use wiring, copper wire or soldering instead of the fuse. The use of non-specified fuses can cause machine failure or fire.
INSTALLATION (cont.)

Power Supply and Field Wiring Connection (cont.)

Power Supply Wires

For Classic 40
• Use at least 12 AWG for the power wires.
  Cord type (4 wires): SJO, SJOT, SJOOW or equivalent
  Voltage rating: 300 V Minimum
  Heat resistance: 140 °F (60 °C) or above
• Prepare three power wires for power line and one wire (green) for grounding.
• Make sure to use conduit tubing when installing power wires.

For Classic 60
• Use at least 12 AWG for the power wires.
  Cord type (4 wires): SO, SOT, SOOW or equivalent
  Voltage rating: 600 V Minimum
  Heat resistance: 140 °F (60 °C) or above
• Prepare three power wires for motive power and one wire (green) for grounding.
• Make sure to use conduit tubing when installing power wires.

Connection to Classic 40 and Classic 60
1. Remove three (3) screws from the upper panel on the control panel side and open the upper panel.
2. Pass the power wire through the conduit hole in the left side panel.
3. Attach the conduit tubing to the conduit hole.
   Trade size of conduit is 1/2 inch.
   Tightening torque: 0.96 ft•lb (1.3 N•m)

Note: Classic 40 and Classic 60 are equipped with phase protectors.
1. The phase sequence is in order of R, S, and T. If the phase sequence is reversed, the unit does not operate.
   At this condition, exchange two of the power wires for R, S and T terminals.
2. Do not use an extension cord on a cord connected unit.

⚠️ WARNING: All electrical work, should only be performed by qualified electrical personnel. Repair to electrical components by non-certified technicians may result in personal injury and/or damage to the unit.
INSTALLATION (cont.)

Optional Accessories and Set Up Configuration

Using the optional accessories not only gives you the ability to customize the cooling application, but also makes the unit work more efficiently.

Unit Installed on the Floor (For Classic 40 and Classic 60)

The unit can be used as a spot cooling system. More information is available at WWW.MOVINCOOL.COM.

1. Standard Configuration
   Without stand kit (For Classic 40 and Classic 60)

   ![Diagram of Classic 40 and 60 Unit]

   CHAMBER
   DUCT (6 in. DIA.)
   TRIM RING

   With stand kit (For Classic 40 ONLY)

   ![Diagram of Classic 40 Unit with Stand Kit]

   CHAMBER
   DUCT (6 in. DIA.)
   TRIM RING
   STAND KIT

Note: The maximum length of each duct is 6.6 ft. (2 m).
INSTALLATION (cont.)
Optional Accessories and Set Up Configuration (cont.)
Unit Installed on the Floor (For Classic 40 and Classic 60)

2. Application Configuration

Note: The maximum length of duct “L” is 66 ft. (20 m).

Range of extension static pressure:

<table>
<thead>
<tr>
<th>Model</th>
<th>Static Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic 40</td>
<td>0.63 IWG (157 Pa) ~ 1.73 IWG (431 Pa)</td>
</tr>
<tr>
<td>Classic 60</td>
<td>0.57 IWG (142 Pa) ~ 1.35 IWG (336 Pa)</td>
</tr>
</tbody>
</table>

Number of blow off ports:

<table>
<thead>
<tr>
<th>Model</th>
<th>Number of Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic 40</td>
<td>3 ~ 5</td>
</tr>
<tr>
<td>Classic 60</td>
<td>4 ~ 7</td>
</tr>
</tbody>
</table>
Unit Suspended from the Ceiling (For Classic 40 ONLY)

When the unit is suspended from the ceiling, cooling air can be sent from the bottom of the unit. More information is available at WWW.MOVINCOOL.COM.

⚠️ WARNING: Make sure that the ceiling structure is capable of supporting the weight of the unit, suspension hardware, and the accessories.

Note:
1. Use standard suspension metal fittings.
2. Do not suspend the unit from the ceiling of a lightweight steel-frame building or wooden building.
3. Make sure to lock the shackle pin with copper wire.
4. Make sure to securely tighten the nut-tightening portion with double-nut locking.
5. If you are uncertain about the strength of ceiling structure, from which the unit is suspended, consult the architect.
6. When working in high places during the installation of unit, provide positive safeguards, such as using a lifeline.
7. After the unit is suspended from the ceiling, make sure that the unit is level. If the unit is not level, adjust each suspension length of the unit with an eyebolt. If the unit slants more than 1.5° horizontally, the drain water will overflow.
8. When the unit is configured as suspended from the ceiling, the signal output can be used with alarm speaker or light indicator to monitor proper operation.
INSTALLATION (cont.)
Optional Accessories and Set Up Configuration (cont.)
Unit Suspended from the Ceiling (For Classic 40 ONLY)

1. Standard Configuration

Note:
1. The maximum length of one duct is 6.6 ft. (2 m). Suspend the duct as required with wires or suspension bars.
2. When installing the drain pipe, make sure it is angled downward for proper drainage.
3. Check following items:
   • No kinks or bends on the drain hose.
   • No trap in the drain hose.
   • The end of the drain hose should be higher than the water level at the drain.
   • No dripping from the drain hose at the clamping area.
   • When installing the unit, empty the drain pan by draining out the water through the drain pan drain pipe.
INSTALLATION (cont.)
Optional Accessories and Set Up Configuration (cont.)
Unit Suspended from the Ceiling (For Classic 40 ONLY)

2. Application Configuration

Note: The maximum length of duct “L” is 66 ft. (20 m).

Range of extension static pressure: 0.63 IWG (157 Pa) ~ 1.73 IWG (431 Pa)
Number of blow off ports: 3 ~ 5
3. Duct Work Procedure
Reverse the blower casing inside the unit.

1. Remove the right side panel.
2. Remove the water guard located at the lower blowoff port.
3. Remove the blind plate located at the lower blowoff port and install it to the upper blowoff port, and remove the grill located at the upper blowoff port and install it to the lower blowoff port.
4. Remove five nuts and reverse the blower casing 180°. Then set the opening of blower casing to the lower blowoff port and tighten the blower casing with the nuts.
5. Install the right side panel.
INSTALLATION (cont.)
Optional Accessories and Set Up Configuration (cont.)
Unit Used as a Portable Type

The unit can be used as a portable spot cooling system by attaching the wagon kit or caster kit. More information is available at WWW.MOVINCOOL.COM.

With wagon kit (For Classic 40 ONLY)

With caster kit (For Classic 40 and Classic 60)

Note:
1. The maximum length of duct is 6.6 ft. (2 m).
2. Do not use the unit in the portable configuration outdoors.
INSTALLATION (cont.)
Optional Accessories and Set Up Configuration (cont.)
Outdoor Installation of the Unit (For Classic 40 and Classic 60)

The unit can be installed outdoors, sending the cool air indoor. More information is available at WWW.MOVINCOOL.COM.

Note:
1. Make sure to run power and remote controller wires through conduit tubing.
2. Make sure to install a residual current operated circuit breaker in the power supply.
3. Completely seal the through holes in the wall for conduit and duct to prevent entry of rain. Use watertight fittings.
4. Do not place the unit directly on the ground. Install the unit at least 7 in. (178 mm) of clearance above ground. The optional standard stand kit (for Classic 40 ONLY) ensures a ground clearance of 7 in. (178 mm) or more.
INSTALLATION (cont.)

Wall Thermostat Connection (Millivolt System ONLY: Option)

Connecting Wall Thermostat to Unit

1. Use with a single stage wall thermostat. Thermostat type: Millivolt System

2. Remove three (3) screws from the upper panel on the control panel side and open the upper panel.

3. Remove two (2) screws and plate from the right side panel.

Insert the wire harness through the clip, grommet, and hole in the right side panel.
Connecting Wall Thermostat to Unit

4. Set the wall thermostat to cooling system mode, since most wall thermostats are designed for both heating and cooling.

5. Prepare the wire harness for connection from the unit to the thermostat. Recommended wire type and size: Thermostat cable / Solid wire 16 ~ 26 AWG

6. Identify the thermostat connectors labeled G, Y, and RC. G (Fan On/Off), Y (Cooling On/Off) and RC (Cooling Transfer - Common)

<table>
<thead>
<tr>
<th>Wall Thermostat Connector Name</th>
<th>Unit Connector Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC</td>
<td>RC</td>
<td>Common</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
<td>Cool On/Off</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
<td>Fan On/Off</td>
</tr>
</tbody>
</table>

7. Connect the wire harness from the terminal of the unit to the thermostat according to the labels shown below.

*Note: Use thermostat that is compatible with millivolt system. Do not connect thermostat to AC power source.*
INSTALLATION (cont.)
Wall Thermostat Connection  
(Millivolt System ONLY: Option) (cont.)

Connecting Wall Thermostat to Unit

8. Install the wall thermostat to the proper location inside the room where it can 
be conveniently accessed. Do not install the wall thermostat where unusual 
heating conditions may occur (i.e. hot stove, hot pipe, fireplace, direct sunlight, 
etc.)

Most thermostats provide these basic functions:

- Fan Mode: On / Auto (Select the desired fan mode)
- System: Cool / Heater (Select Cool only)

For wall thermostat operation, see the operation manual supplied with the wall 
thermostat.

Setting The Unit for Wall Thermostat Connection

1. Press and hold FAN button, SET TEMP UP  and DOWN  buttons 
simultaneously to activate wall thermostat connection.

2. Press SET TEMP UP  button to select “Sb” indicates on LED display for wall 
thermostat enable function. (“Ho” indicates on display for wall thermostat 
disable function.)

3. Press COOL button to set wall thermostat function. If COOL button is not 
pressed within 10 sec., the setting is automatically confirmed.
Warning Signal Connection (Output Signal Terminal L+ and L-)

The controller is equipped with a warning signal output relay type (Form C, normal open dry contact) which can be used to monitor the failure condition.

*Note: When the unit is configured as suspended from the ceiling, the signal output can be used with alarm speaker or light indicator to monitor proper operation.*

Relay contactor is closed when the unit operates abnormally.

The relay output contactor is rated 2 A at 30 VDC or 2 A at 30 VAC (resistive load) and it is compatible with various warning devices such as alarm speaker, light indicators, etc.

**Connecting Warning Signal from Controller**

1. Remove three (3) screws from the upper panel on the control panel side and open the upper panel.

2. Remove two (2) screws and plate from the right side panel.
3. Insert the warning signal wire through the clip, grommet, and hole in the right side panel.

Note: Use recommended warning signal wire size from 16 AWG to 26 AWG for a solid wire, or 16 AWG to 22 AWG for a stranded wire with ring terminal for #6 stud size.

4. Connect the warning device to terminal L+ and L- according to its polarities.
Fire Alarm Control Panel Connection (Input Signal Terminal E+ and E-)

The controller is equipped with a normal open input signal connection, which can be connected directly from the fire alarm control panel. This input signal terminal should only be connected to a close or open dry contact signal. When receiving the signal from the fire alarm control panel, the unit turns off and does not turn back on until it has been RESET.

Connecting Fire Alarm Control Panel to Controller

1. Remove three (3) screws from the upper panel on the control panel side and open the upper panel.

2. Remove two (2) screws and plate from the right side panel.
INSTALLATION (cont.)

Fire Alarm Control Panel Connection (Input Signal Terminal E+ and E-) (cont.)

Connecting Fire Alarm Control Panel to Controller

3. Insert the fire alarm signal wire through the clip, grommet, and hole in the right side panel.

Note: Use recommended fire alarm signal wire size from 16 AWG to 26 AWG for a solid wire, or 16 AWG to 22 AWG for a stranded wire with ring terminal for #6 stud size.

4. Connect the fire alarm device to terminal E+ and E- according to its polarities.
OPERATION

Features

1. A digital electronic control panel, which allows the user to easily control the unit’s operation.

2. Digital LED display that indicates:
   a. Room temperature and set point temperature (either Fahrenheit or Celsius)
   b. Status codes

3. The set point temperature can be adjusted between 75 °F (24 °C) and 95 °F (35 °C) by the SET TEMP buttons (△/▼).

4. Fire alarm control panel connection with automatic shut off.

5. Automatic shut off, warning signal output and alarm for temperature sensor failure, lose of cooling, and conditions of self-diagnostic codes.

6. An automatic restart feature when the power is lost and regained. The unit returns to the operating mode it was in prior to the loss of power.

7. Enable and disable function for wall thermostat connection.
OPERATION (cont.)

Control Panel

Before operating the unit, it is important to familiarize yourself with the basic controls located on the control panel.

1. COOL ON/OFF Button
   Activates COOL mode or turns the unit off.

2. FAN Button
   Activates FAN ONLY mode or turns the unit off.

3. SET TEMP Buttons (△/▽)
   Increases or decreases the temperature set point during COOL mode.

4. Room Temperature/Set Point Display
   Displays a flashing set point temperature for 5 sec, and then continuously indicates the room temperature.

5. Temperature Scale LED
   Lit to indicate the current temperature being displayed in either °F or °C.

6. ON LED
   Turns on during FAN ONLY mode and during COOL mode with Fan Operate mode.

7. AUTO LED
   Turns on during COOL mode with FAN STOP mode.
OPERATION (cont.)
Control Panel (cont.)
LED Display Descriptions

In normal operation, the LED displays the following descriptions.

<table>
<thead>
<tr>
<th>Display</th>
<th>Descriptions</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>.</td>
<td>Right decimal point is on.</td>
<td>Standby or FAN ONLY mode.</td>
</tr>
<tr>
<td>0</td>
<td>Indicates wall thermostat enable function is set.</td>
<td>Lit during wall thermostat connection.</td>
</tr>
<tr>
<td>78</td>
<td>Indicates room temperature when display is lit. (Left fig. : Room temperature at 78 °F)</td>
<td>During COOL mode.</td>
</tr>
<tr>
<td>75</td>
<td>Indicates set point temperature when display is flashing for 5 sec. (Left fig. : Set point temperature at 75 °F)</td>
<td>During set point temperature adjustment.</td>
</tr>
</tbody>
</table>

Note: The ROOM TEMP display range is from 0 °F (-9 °C) to 109 °F (60 °C). When the display value is greater than 99 °F, it displays values of 00 for 100 °F, 01 for 101 °F, and 09 for 109 °F. (This only applies to Fahrenheit values.)
OPERATION (cont.)

Operating Modes

The Classic 40 and Classic 60 can be operated in two modes, FAN ONLY and COOL. When in FAN ONLY mode, the unit circulates the surrounding air. When in COOL mode, the compressor is operated and cool air is circulated.

1. COOL Mode
   Once the compressor has been disengaged for more than 120 sec, the unit operates in FAN ONLY mode for approximately 5 sec before the compressor re-engages.

2. Temperature Control
   The room temperature thermistor monitors the inlet temperature versus set point temperature and switches the unit automatically between COOL and FAN ONLY modes.

3. Fan Mode Control DIP Switch
   The fan mode control DIP switch determines whether the fan continues to operate or stop when the compressor cycles off. (Set point temperature below the inlet air or room temperature.) The unit has been preset at the factory for continuous fan operation.

   Note: If you want to change the fan mode operation (from OPERATE to STOP), contact your MovinCool reseller.

4. Temperature Scale Display
   The temperature scale display changes the temperature(s) that are displayed to either °C or °F. The unit has been preset from the factory to display the temperature(s) in °F.

   Note: If you want to change the temperature scale display (from °F to °C), hold down the SET TEMP buttons (△/▽) and the FAN button simultaneously for 3 sec.
OPERATION (cont.)

Operating in COOL Mode
1. The unit can be operated in COOL mode by pressing the COOL ON/OFF button.
   
   Note: In COOL mode the unit can only be turned off by pressing the COOL ON/OFF button.

2. Change the temperature set point by pressing the SET TEMP buttons (△/▽).
   
   Note: When turning the unit on, the set point and operation mode are determined by the last operating mode.

Operating in FAN ONLY Mode
1. The unit can also be operated in FAN ONLY mode by pressing FAN button.

2. The unit can only be turned off by pressing the FAN button again.

Changing from FAN ONLY Mode to COOL Mode
The COOL mode can be activated while the unit is operating in FAN ONLY mode. To do this, simply press the COOL ON/OFF button.

Note: The FAN ONLY mode does not operate after the COOL mode has been activated. The unit can only be turned off by pressing the COOL ON/OFF button.
OPERATION (cont.)

Self-Diagnostic Codes

Self-diagnostic codes are displayed on the control panel under the following conditions:

<table>
<thead>
<tr>
<th>LED Display Codes</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="E1" /></td>
<td>When room thermistor becomes open or shorted, display shows “E1” and cool mode operation is off. Display and cool mode operation are returned to normal operation after room thermistor is fixed.</td>
</tr>
<tr>
<td><img src="image" alt="E2" /></td>
<td>When freeze thermistor becomes open or shorted, display shows “E2” and cool mode operation is off. Display and cool mode operation are returned to normal operation after freeze thermistor is fixed.</td>
</tr>
<tr>
<td><img src="image" alt="E4" /></td>
<td>When the protective device is activated, the LED displays “E4” and cool mode operation is off.</td>
</tr>
<tr>
<td><img src="image" alt="CF" /></td>
<td>When lose of cooling occurs 3 times, the unit displays “CF”. The unit returns to normal operation after the problem is fixed and the controller is RESET. To RESET: Hold down the SET TEMP (△ / ▽) buttons simultaneously for 3 sec., and the controller returns to normal operation.</td>
</tr>
<tr>
<td><img src="image" alt="HP" /></td>
<td>When high pressure switch is activated 3 times, the unit displays blinking “HP” and after 10 times in 24 hr., “HP” turns on. The unit returns to normal operation after the problem is fixed and the controller is RESET. To RESET: Hold down the SET TEMP (△ / ▽) buttons simultaneously for 3 sec., and the controller returns to normal operation.</td>
</tr>
<tr>
<td><img src="image" alt="AL" /></td>
<td>When the fire alarm control panel input signal is CLOSED, the unit turns off, the LED displays “AL”, and the buzzer turns on. Once input signal is OPENED and unit has been RESET or the wall thermostat has been turned off and on, the unit returns to normal operation. To RESET: Hold down the SET TEMP (△ / ▽) buttons simultaneously for 3 sec, and the controller returns to normal operation.</td>
</tr>
</tbody>
</table>

Contact your MovinCool reseller or a qualified technician if problem persists.
DAILY INSPECTION & MAINTENANCE

Clean the Air Filters

Clean the air filters once a week. If the unit is used in a dusty environment, more frequent cleaning may be required. A dirty air filter can reduce air output resulting in a decrease in cooling capacity.

Filter Removal Method

1. Turn the unit off, by pressing the COOL ON/OFF button.

2. Remove the air filters.
   
   Note: To remove four air filters, lift upward, then pull outward from the bottom.

3. Remove the element from each filter.

Filter Element Cleaning Method

1. Remove dust from the element with a vacuum cleaner, or rinse in cold or lukewarm water. If the element is extremely dirty, wash with a neutral detergent.

2. After the element has been cleaned, rinse with clean running water, allow to dry, then reinstall.
DAILY INSPECTION & MAINTENANCE (cont.)

In-Season/Off-Season Inspection & Maintenance

⚠️ **WARNING:** To prevent an accident due to electrical shock, perform inspection and maintenance only after turning off the power at the circuit breaker or unplugging the power cord.

**In-Season**

1. Check the prongs and surface of the power cord plug for dust and/or dirt. If dust and/or dirt are present, wipe off with a clean dry cloth.

2. Check the power cord, plug and prongs for damage or excess play. If any damage or excess play is found, contact your MovinCool reseller or a qualified technician for repair.

3. Check the air filters.

4. Clean the outside of the unit(s) with a damp cloth or mild nonabrasive cleaner.

⚠️ **WARNING:** Do not clean the unit directly by pouring water on electrical parts such as control panel and relay box. This could result in poor insulator causing electrical shock or leakage.

5. Check the looseness and clogging of drain pipe. If the drain pipe is loose or clogged, take corrective action so that drain water flows freely.

6. Check the looseness of each connection terminal inside the control box. Fully check the following terminals.
   - Main terminal
   - Grounding terminal

7. Test the power supply ground fault breaker at least once a month.

8. Check if abnormal noise or vibration is generated from the unit and also check for missing or loose nuts. After the start or stop of operation, the unit may make a gurgling sound. This sound is generated by refrigerant inside the unit and does not indicate machine trouble.
DAILY INSPECTION & MAINTENANCE (cont.)
In-Season/Off-Season Inspection & Maintenance (cont.)

Off-Season

1. Operate the unit in FAN ONLY mode for 8 hr.
   
   \textit{Note: Operation is necessary to dry out the inside of the unit.}

2. Disconnect the power cord from the AC outlet.

3. Check the prongs and surface of the power cord plug for dust and/or dirt. If dust and/or dirt are present, wipe off with a clean dry cloth.

4. Check the power cord, plug and prongs for damage or excess play. If any damage or excess play is found, contact your MovinCool reseller or a qualified technician for repair.

5. Clean the air filters.

6. Turn off the power at the circuit breaker.
## TROUBLESHOOTING

Check the following items before calling your MovinCool reseller or a qualified technician.

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>POSSIBLE CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit does not operate</td>
<td>1. Power supply is off</td>
<td>Check circuit breaker.</td>
</tr>
<tr>
<td></td>
<td>2. Incorrect power phase sequence</td>
<td>Check connection or exchange two wires of R, S and T.</td>
</tr>
<tr>
<td></td>
<td>3. Power interruption</td>
<td>Unit will turn on automatically when power returns (Some thermostats require to be reset).</td>
</tr>
<tr>
<td></td>
<td>4. Blockage of air duct</td>
<td>Check duct for any blockages or excessive kinks in ducting.</td>
</tr>
<tr>
<td></td>
<td>5. Turn off signal input</td>
<td>Check for turn off signal input (fire alarm control panel).</td>
</tr>
<tr>
<td></td>
<td>6. High pressure switch activated 10 times in 24 hr.</td>
<td>1. Clean air filter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Check inlet and outlet air, and make sure that there were no object that may prevent air flow into or out of the unit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Check environmental condition to ensure it is within operating range.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. RESET controller. To RESET: Hold down the SET TEMP (△/▽) buttons simultaneously for 3 sec., controller returns to normal operation.</td>
</tr>
<tr>
<td></td>
<td>7. Battery ran out on thermostat (when wall thermostat is used).</td>
<td>Change battery.</td>
</tr>
<tr>
<td></td>
<td>8. Wall thermostat enable function and / or improper wiring connection</td>
<td>Check wall thermostat wiring connection and unit setting. (See “Wall Thermostat Connection” section.)</td>
</tr>
<tr>
<td>Insufficient Cooling / Unit operation interrupted frequently.</td>
<td>1. Air inlet/outlet blocked.</td>
<td>Clean air inlet/outlet.</td>
</tr>
<tr>
<td></td>
<td>2. Dirty / Blocked filters</td>
<td>Clean / replace air filter.</td>
</tr>
<tr>
<td></td>
<td>3. Improper temperature setting</td>
<td>Adjust temperature setting.</td>
</tr>
<tr>
<td></td>
<td>4. Outside of operating range</td>
<td>Use within operating temperature range.</td>
</tr>
</tbody>
</table>
## TROUBLESHOOTING (cont.)

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>POSSIBLE CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm coming from unit and unit stops.</td>
<td>Receiving fire alarm signal input</td>
<td>Make sure the input signal is OPENED. RESET the unit or turn the wall thermostat off and on. The unit returns to normal operation. To RESET: Hold down the SET TEMP ((\Delta/\nabla)) buttons simultaneously for 3 sec.</td>
</tr>
</tbody>
</table>

If symptoms persist after the above actions have been taken, turn the unit off, disconnect the power and contact your MovinCool reseller or a qualified technician.


## TROUBLESHOOTING (cont.)

### Installation Check Sheet

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>CHECK SHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Unit</td>
<td>Check and make sure all screws are tight and unit is secured in place.</td>
</tr>
<tr>
<td></td>
<td>Check and make sure inlet / outlet air exhaust are clear without blockage.</td>
</tr>
<tr>
<td>Wiring</td>
<td>Check and make sure the unit is properly connected to the dedicated circuit breaker.</td>
</tr>
<tr>
<td></td>
<td>Check and make sure all wiring are properly connected to R, S and T and secured.</td>
</tr>
<tr>
<td></td>
<td>Check and make sure ground wire is tighten and secured.</td>
</tr>
<tr>
<td>Drain Hose Connection</td>
<td>Check and make sure that heat insulator which is provided with drain hose prevents condensation on hose surface.</td>
</tr>
<tr>
<td>Wall Thermostat (Option)</td>
<td>Check and make sure wall thermostat is connected properly to unit.</td>
</tr>
<tr>
<td></td>
<td>Check for incorrect power supply polarity or setting for wall thermostat.</td>
</tr>
<tr>
<td>Test Operation Check power connection</td>
<td>If the unit does not enter the stand-by mode after the power is turned on, exchange two wires of R, S and T (L1, L2 and L3).</td>
</tr>
<tr>
<td>Check Operation with Wall Thermostat</td>
<td>Set wall thermostat to Fan On or Fan Only mode to confirm fan only mode operation.</td>
</tr>
<tr>
<td></td>
<td>Set wall thermostat to Fan Auto or Cool mode operation. During cool mode operation, check and confirm cooling operation after delay timer is expired. (Note: Delay timer vary from 2 ~ 5 min. depending on thermostat model used.)</td>
</tr>
<tr>
<td>Abnormal Noise</td>
<td>Check and observe abnormal noise during Blowing/Cooling operation.</td>
</tr>
<tr>
<td>Drain</td>
<td>During cooling operation, check and observe condensation drip through normal drainage path.</td>
</tr>
<tr>
<td>Air Leakage</td>
<td>Check for air leakage from duct and duct connection.</td>
</tr>
</tbody>
</table>
## TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>ITEMS/FEATURES</th>
<th>Classic 40</th>
<th>Classic 60</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rating Conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry bulb</td>
<td>95 °F(35 °C)</td>
<td>95 °F(35 °C)</td>
</tr>
<tr>
<td>Wet bulb</td>
<td>83 °F(28 °C)</td>
<td>83 °F(28 °C)</td>
</tr>
<tr>
<td>Humidity</td>
<td>(60 %RH)</td>
<td>(60 %RH)</td>
</tr>
<tr>
<td><strong>Specifications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power frequency</td>
<td>60 Hz</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Line voltage</td>
<td>3 Phase 220 V</td>
<td>3 Phase 460 V</td>
</tr>
<tr>
<td>Power consumption</td>
<td>4.20 kw</td>
<td>5.90 kW</td>
</tr>
<tr>
<td>Current consumption</td>
<td>14.0 A</td>
<td>8.8 A</td>
</tr>
<tr>
<td>Power factor</td>
<td>79 %</td>
<td>84 %</td>
</tr>
<tr>
<td>Starting current</td>
<td>72 A</td>
<td>65 A</td>
</tr>
<tr>
<td>Power wiring</td>
<td>12 (2-core) AWG</td>
<td>12 (2-core) AWG</td>
</tr>
<tr>
<td>Recommended fuse size</td>
<td>25 A</td>
<td>20 A</td>
</tr>
<tr>
<td><strong>Cooling Unit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling capability</td>
<td>39,000 Btu/h (11,400 W)</td>
<td>60,000 Btu/h (17,600 W)</td>
</tr>
<tr>
<td>Cooling system</td>
<td>Direct Expansion</td>
<td>Direct Expansion</td>
</tr>
<tr>
<td><strong>Blower</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of fan:</td>
<td>Evaporator</td>
<td>Centrifugal Fan</td>
</tr>
<tr>
<td></td>
<td>Condenser</td>
<td>Propeller Fan</td>
</tr>
<tr>
<td>Air volume:</td>
<td>Evaporator</td>
<td>1,060 CFM (1,800 m³/h) *1</td>
</tr>
<tr>
<td></td>
<td>Condenser</td>
<td>2,650 CFM (4,500 m³/h) *2</td>
</tr>
<tr>
<td>Motor output:</td>
<td>Evaporator</td>
<td>0.75 kW</td>
</tr>
<tr>
<td></td>
<td>Condenser</td>
<td>0.40 kW</td>
</tr>
<tr>
<td>Compressor</td>
<td>Hermetic Scroll</td>
<td>Hermetic Scroll</td>
</tr>
<tr>
<td>Type</td>
<td>2.30 kW</td>
<td>3.89 kW</td>
</tr>
<tr>
<td>Output</td>
<td>R-410A</td>
<td>R-410A</td>
</tr>
<tr>
<td>Refrigerant type</td>
<td>3.90 lb (1.77 kg)</td>
<td>5.50 lb (2.50 kg)</td>
</tr>
<tr>
<td>Refrigerant capacity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1: Rated at external static pressure 0.63 IWG (157 Pa).
*2: Rated at external static pressure 0 IWG (0 Pa).
*3: Rated at external static pressure 0.57 IWG (142 Pa).
*4: Rated at external static pressure 0 IWG (0 Pa).
## TECHNICAL SPECIFICATIONS (cont.)

<table>
<thead>
<tr>
<th>ITEMS/FEATURES</th>
<th>Classic 40</th>
<th>Classic 60</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety Devices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressor overload protector</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Fan motor protector</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Anti-freezing thermistor</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Automatic restart (power interruption)</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Compressor time delay</td>
<td>120 sec</td>
<td>120 sec</td>
</tr>
<tr>
<td>High pressure interruption</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Signal input/output</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Lose of cooling</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Phase reverse protector</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td><strong>Dimensions &amp; Weight</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W×D×H</td>
<td>25.8 × 43.5 × 38.0 in (656 × 1,106 × 965 mm)</td>
<td>31.7 × 49.4 × 42.4 in (804 × 1,254 × 1,077 mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>344 lb (156 kg)</td>
<td>474 lb (215 kg)</td>
</tr>
<tr>
<td><strong>Operating Conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inlet air: Maximum</td>
<td>113 °F (45 °C), 50 %RH</td>
<td>113 °F (45 °C), 50 %RH</td>
</tr>
<tr>
<td>Minimum</td>
<td>75 °F (24 °C), 50 %RH</td>
<td>75 °F (24 °C), 50 %RH</td>
</tr>
<tr>
<td><strong>Control Device</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature control</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td><strong>Wall Thermostat Type (Option)</strong></td>
<td>Millivolt System</td>
<td>Millivolt System</td>
</tr>
</tbody>
</table>
LIMITED WARRANTY

DENSO SALES CALIFORNIA, INC. (“DENSO”) warrants its MOVINCOOL Products only to the extent stated in its official written warranties. Unless otherwise specifically provided in writing by DENSO, DENSO warrants to end-user that the Products shall be free of defects in materials or workmanship and will function in accordance with DENSO’s published specifications under ordinary intended use and service for a period of twelve (12) months after delivery to the end-user; provided, however in the case of the compressor element of the Products such warranty shall be for a period of thirty six (36) months after delivery to the end-user. DENSO shall, at its sole option, repair or replace any defective Product covered by this warranty. Such remedy shall be end-user’s sole remedy with respect to any particular defect in the Products.

This warranty does not cover defects or malfunctions which result from causes beyond DENSO’s control, including, without limitation, (i) unusual physical or electrical stress; (ii) accident, neglect, abuse, misuse or other abnormal use; (iii) failure to perform routine maintenance in accordance with DENSO’s recommended procedures; (iv) normal wear and tear; (v) repairs or attempted repairs by an unauthorized person; (vi) modifications or alterations to the Products; (vii) use with supplies or devices not supplied or approved by DENSO; or (viii) improper servicing. This warranty shall extend only to the original end-user and shall be void if any labels or other identifying marks permanently affixed to Products when shipped by DENSO are removed, altered, defaced or obliterated.

The aforesaid warranty is the only warranty made by DENSO with respect to the Products and is in lieu of all obligations or liabilities on the part of DENSO for damages arising out of or in connection with the sale, use or performance of the Products, including, without limitation, any lost profits or any other consequential, incidental, special or exemplary damages of any kind.
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PURCHASE DATE: ________________________________
SERIAL NUMBER: ________________________________