FEATURES

• Allows simultaneous heating and cooling of multiple zones
• Used with VRB Heat Recovery outdoor units
• Comprised of a series of solenoid valves that control refrigerant flow through each indoor unit based on the operational mode selected for that indoor unit
• Linear Expansion Design - Regulates the flow of refrigerant and reduces sound levels
• Braze Fittings - For outdoor and indoor unit pipe connections

USAGE

• V8MSBB02 (18F50) - 2 groups of 5, 10 indoor units maximum
• V8MSBB04 (18F51) - 4 groups of 5, 20 indoor units maximum
• V8MSBB06 (18F52) - 6 groups of 5, 30 indoor units maximum
• V8MSBB08 (17V25) - 8 groups of 5, 40 indoor units maximum
• V8MSBB10 (17V26) - 10 groups of 5, 41 indoor units maximum
• V8MSBB12 (17V27) - 12 groups of 5, 41 indoor units maximum

NOTE - For indoor use only.

APPROVALS AND WARRANTY

APPROVALS

• ETL certified for the U.S. and Canada

WARRANTY

• Components - Limited one year
SPECIFICATIONS

V8MSBB02 - V8MSBB06

<table>
<thead>
<tr>
<th>General Data</th>
<th>Model Number</th>
<th>V8MSBB02</th>
<th>V8MSBB04</th>
<th>V8MSBB06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Number of Indoor Unit Groups</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Maximum Number of Indoor Units in Each Group</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Maximum Number of all Downstream Indoor Units</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

Valve Type
- Solenoid

Capacity
- Maximum Capacity Each Indoor Unit Group (Btuh)
  - V8MSBB02: 54,000 or less
  - V8MSBB04: 54,000 or less
  - V8MSBB06: 54,000 or less
- Total Capacity of all Downstream Indoor Units (Btuh)
  - V8MSBB02: 108,000
  - V8MSBB04: 168,000
  - V8MSBB06: 216,000

Piping Connections
- Connection to Outdoor Unit
  - Liquid line O.D. - in.
    - V8MSBB02: 1/2, 3/8
    - V8MSBB04: 5/8, 1/2, 3/8
    - V8MSBB06: 5/8, 1/2, 3/8
  - High Pressure Gas Pipe O.D. - in.
    - V8MSBB02: 7/8, 3/4, 5/8
    - V8MSBB04: 1-1/8, 7/8, 3/4
    - V8MSBB06: 1-1/8, 7/8, 3/4
  - Low Pressure Gas Pipe O.D. - in.
    - V8MSBB02: 1-3/8, 1-1/8, 7/8
    - V8MSBB04: 1-3/8, 1-1/8, 7/8
    - V8MSBB06: 1-3/8, 1-1/8, 7/8

- Connection to Indoor Unit
  - Liquid Pipe O.D. - in.
    - V8MSBB02: 1/4, 3/8
    - V8MSBB04: 1/4, 3/8
    - V8MSBB06: 1/4, 3/8
  - Gas Pipe O.D. - in.
    - V8MSBB02: 1/2, 5/8
    - V8MSBB04: 1/2, 5/8
    - V8MSBB06: 1/2, 5/8

Unit shipping weight - lbs.
- V8MSBB02: 201
- V8MSBB04: 205
- V8MSBB06: 209

Control Wiring (AWG)
- 2-Core Shielded, Stranded, Polarity Sensitive, 18 AWG

ELECTRICAL DATA

<table>
<thead>
<tr>
<th>Line voltage data - 60 hz - 1ph</th>
<th>V8MSBB02</th>
<th>V8MSBB04</th>
<th>V8MSBB06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input (W)</td>
<td>138</td>
<td>172.5</td>
<td>195.5</td>
</tr>
</tbody>
</table>

1 x 3/4 in. condensate drain adaptor furnished for field installation (if required).

2 HACR type circuit breaker or fuse.

3 Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

SPECIFICATIONS

V8MSBB08 - V8MSBB12

<table>
<thead>
<tr>
<th>General Data</th>
<th>Model Number</th>
<th>V8MSBB08</th>
<th>V8MSBB10</th>
<th>V8MSBB12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Number of Indoor Unit Groups</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Maximum Number of Indoor Units in Each Group</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Maximum Number of all Downstream Indoor Units</td>
<td>40</td>
<td>41</td>
<td>41</td>
<td></td>
</tr>
</tbody>
</table>

Valve Type
- Solenoid

Capacity
- Maximum Capacity Each Indoor Unit Group (Btuh)
  - V8MSBB08: 54,000 or less
  - V8MSBB10: 54,000 or less
  - V8MSBB12: 54,000 or less
- Total Capacity of all Downstream Indoor Units (Btuh)
  - V8MSBB08: 290,000
  - V8MSBB10: 290,000
  - V8MSBB12: 290,000

Piping Connections
- Connection to Outdoor Unit
  - Liquid line O.D. - in.
    - V8MSBB08: 3/4, 5/8, 1/2, 3/8
    - V8MSBB10: 3/4, 5/8, 1/2, 3/8
    - V8MSBB12: 3/4, 5/8, 1/2, 3/8
  - High Pressure Gas Pipe O.D. - in.
    - V8MSBB08: 1-1/8, 7/8, 3/4
    - V8MSBB10: 1-1/8, 7/8, 3/4
    - V8MSBB12: 1-1/8, 7/8, 3/4
  - Low Pressure Gas Pipe O.D. - in.
    - V8MSBB08: 1-3/8, 1-1/8, 7/8
    - V8MSBB10: 1-3/8, 1-1/8, 7/8
    - V8MSBB12: 1-3/8, 1-1/8, 7/8

- Connection to Indoor Unit
  - Liquid Pipe O.D. - in.
    - V8MSBB08: 1/4, 3/8
    - V8MSBB10: 1/4, 3/8
    - V8MSBB12: 1/4, 3/8
  - Gas Pipe O.D. - in.
    - V8MSBB08: 1/2, 5/8
    - V8MSBB10: 1/2, 5/8
    - V8MSBB12: 1/2, 5/8

Unit shipping weight - lbs.
- V8MSBB08: 201
- V8MSBB10: 205
- V8MSBB12: 209

Control Wiring (AWG)
- 2-Core Shielded, Stranded, Polarity Sensitive, 18 AWG

ELECTRICAL DATA

<table>
<thead>
<tr>
<th>Line voltage data - 60 hz - 1ph</th>
<th>V8MSBB08</th>
<th>V8MSBB10</th>
<th>V8MSBB12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input (W)</td>
<td>138</td>
<td>172.5</td>
<td>195.5</td>
</tr>
</tbody>
</table>

1 x 3/4 in. condensate drain adaptor furnished for field installation (if required).

2 HACR type circuit breaker or fuse.

3 Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.
### SOUND DATA

Measured from the bottom of the unit.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>V8MSBB02</th>
<th>V8MSBB04</th>
<th>V8MSBB06</th>
<th>V8MSBB08</th>
<th>V8MSBB10</th>
<th>V8MSBB12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heating</strong></td>
<td>38</td>
<td>39</td>
<td>40</td>
<td>42</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td><strong>Cooling</strong></td>
<td>39</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>45</td>
<td>43</td>
</tr>
<tr>
<td>(^1) <strong>Main Heating</strong></td>
<td>39</td>
<td>42</td>
<td>41</td>
<td>44</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>(^1) <strong>Main Cooling</strong></td>
<td>44</td>
<td>44</td>
<td>43</td>
<td>46</td>
<td>45</td>
<td>43</td>
</tr>
</tbody>
</table>

1. The majority of indoor units are operating in cooling or heating mode.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>V8MSBB02</th>
<th>V8MSBB04</th>
<th>V8MSBB06</th>
<th>V8MSBB08</th>
<th>V8MSBB10</th>
<th>V8MSBB12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum</strong></td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>22</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>58</td>
<td>59</td>
<td>59</td>
<td>58</td>
<td>56</td>
<td>60</td>
</tr>
</tbody>
</table>

2. This data represents the instantaneous peak data during mode switching.

**NOTES:**

Sound measured at 68°F ambient temperature at MS Box.

Tested in semi-anechoic room.
### Model No. V8MSBB02

<table>
<thead>
<tr>
<th>Pipe Diameter - in.</th>
<th>Connections to Outdoor Unit</th>
<th>Connections to Indoor Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Pressure Gas Pipe</td>
<td>High Pressure Gas Pipe</td>
</tr>
</tbody>
</table>
## DIMENSIONS

### V8MSBB04

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Pipe Diameter - in.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Connections to Outdoor Unit</td>
</tr>
<tr>
<td></td>
<td>Low Pressure Gas Pipe</td>
</tr>
</tbody>
</table>

![Diagram of V8MSBB04](image-url)
### Dimensions

**Model No.: V8MSBB06**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Pipe Diameter - in.</th>
<th>Connections to Indoor Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Connections to Outdoor Unit</td>
</tr>
<tr>
<td>V8MSBB06</td>
<td></td>
<td>Low Pressure Gas Pipe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High Pressure Gas Pipe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Liquid Pipe</td>
</tr>
</tbody>
</table>
### V8MSBB08, V8MSBB10, V8MSBB12
(V8MSBB12 Shown)

#### Dimensions

**Model No.**

<table>
<thead>
<tr>
<th></th>
<th>Connections to Outdoor Unit</th>
<th>Connections to Indoor Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Pressure Gas Pipe</td>
<td>High Pressure Gas Pipe</td>
</tr>
</tbody>
</table>
INSTALLATION CLEARANCES

(V8MSBB12 Shown)

**CONCRETE CEILING**

11-7/8 (300) Minimum

**SUSPENDED CEILING**

2 (51) Minimum

18 (457) Maximum

48 (1219) Maximum

**FRONT VIEW**

Required! Suitably sized access panel required to provide full access to electrical panel

**TOP VIEW**

Suitably sized access panel for gaining access to indoor unit connections or isolating ball valves if mounted above a solid ceiling

Access panels are a requirement for system start-up and future preventative maintenance.
<table>
<thead>
<tr>
<th>Sections</th>
<th>Description of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specifications</td>
<td>Updated Total Capacities for V8MSBB04 and V8MSBB06 models.</td>
</tr>
</tbody>
</table>