**PRODUCT SPECIFICATIONS**

- **Nominal SEER**
  - 018 = 1.5 tons
  - 024 = 2 tons
  - 030 = 2.5 tons
  - 036 = 3 tons
  - 042 = 3.5 tons
  - 048 = 4 tons
  - 060 = 5 tons

- **Refrigerant Type**
  - X = R-410A

- **Unit Type**
  - P = Heat Pump Outdoor Unit

- **Cooling Stages**
  - 1 = Single Stage Compressor

- **Cooling Capacity**
  - 18,000 to 58,500 Btuh

- **Heating Capacity**
  - 16,900 to 56,000 Btuh

- **SEER up to 17.00**
- **HSPF up to 9.80**
- **1.5 to 5 Tons**

**MODEL NUMBER IDENTIFICATION**

- **ML 16 XP 1 - 036 - 230 A 01**

- **Product Tier**
  - ML = Merit® Series

- **Nominal SEER**
  - 036 = 3 tons

- **Refrigerant Type**
  - X = R-410A

- **Unit Type**
  - P = Heat Pump Outdoor Unit

- **Cooling Stages**
  - 1 = Single Stage Compressor

- **Revision Level**

- **Ratings Revision Level**

- **Voltage**
  - 230 = 208/230V-1 phase-60Hz

- **Nominal Cooling Capacity**
  - 018 = 1.5 tons
  - 024 = 2 tons
  - 030 = 2.5 tons
  - 036 = 3 tons
  - 042 = 3.5 tons
  - 048 = 4 tons
  - 060 = 5 tons

**Bulletin No. 210881**

November 2020

Supersedes June 2020
FEATURE HIGHLIGHTS

1. Outdoor Coil Fan
2. Quantum™ Coil
3. Expansion Valve - Outdoor Unit
4. Four-Way Reversing Valve
5. High Capacity Liquid Line Drier
6. Scroll Compressor
7. Defrost Control
8. Heavy Gauge Steel Cabinet
9. Refrigerant Line Connections

CONTENTS

Approvals And Warranty .......................................................... .3
Dimensions - Unit ....................................................................... 10
Electrical Data ........................................................................... 7
Features ..................................................................................... 3
Field Wiring ............................................................................... 9
Installation Clearances ............................................................... 9
Model Number Identification ..................................................... 1
Optional Accessories - Order Separately .................................... 7
Sound Data ............................................................................... 9
Specifications ............................................................................ 7
TXV Substitution ......................................................................... 11
TXV Usage ................................................................................. 11
**APPLICATIONS**

- 1.5 through 5 ton
- Sound levels as low as 76 dBA
- Single phase power supply
- Vertical air discharge
- Applicable to indoor air handlers or gas furnaces with indoor add-on coils
- Shipped completely factory assembled, piped, and wired
- Factory tested operated

**NOTE** - When heat pumps are used with gas furnaces, a dual-fuel compatible thermostat or a zone control system with dual-fuel capabilities must be used (order separately).

**NOTE** - Installer must set heat pump, connect refrigerant lines, and make electrical connections to complete job.

**REFRIGERATION SYSTEM**

**R-410A Refrigerant**
- Non-chlorine, ozone friendly
- Unit is factory pre-charged

**NOTE** - Total system refrigerant charge is dependent on outdoor unit size, indoor unit size and refrigerant line length.

**NOTE** - Refer to the unit-mounted charging sticker to determine correct amount of charge required.

1. **Outdoor Coil Fan**
   - Direct drive fan
   - Vertical air discharge
   - Fan motor is inherently protected
   - Totally enclosed motor
   - Louvered steel top fan guard

2. **Quantum™ Coil**
   - Lennox designed and fabricated coil
   - Enhanced aluminum alloy tube/enhanced fin coil
   - Ripple-edged aluminum fins
   - Aluminum tube construction
   - Lanced fins for maximum fin surface exposure
   - Fin collars grip tubing for maximum contact area
   - Flared shoulder tubing connections
   - Factory tested under high pressure
   - Entire coil is accessible for cleaning

**High Pressure Switch**
- Protects the system from high pressure conditions that can be a result of fan failure or a blocked/dirty coil
- Automatic reset

**Low Pressure Switch**
- Shuts off unit if suction pressure falls below setting
- Provides loss of charge and freeze-up protection
- Automatic reset

3. **Expansion Valve - Outdoor Unit**
   - Designed and sized for heat pump systems
   - Sensing bulb senses evaporator suction temperature during heating cycle
**REFRIGERATION SYSTEM (continued)**

4. **Four-Way Reversing Valve**
   - Rapid changeover of refrigerant flow direction from cooling to heating and vice versa
   - Operates on pressure differential between outdoor unit and indoor unit of the system
   - Factory installed

5. **High-Capacity Liquid Line Drier**
   - Factory installed in the liquid line
   - Drier traps moisture or dirt
   - 100% molecular-sieve, bead type, bi-flow drier

**Optional Accessories**

- **Check/Expansion Valve Kits**
  - Field installed on certain indoor units
  - See TXV Usage table
  - Chatleff style fitting

- **Loss of Charge Switch Kit**
  - Protects compressor from damage from low refrigerant charge conditions
  - SPST, normally-closed
  - Automatic reset

- **Freezestat**
  - Installs on or near the vapor line of the indoor coil or on the suction line
  - Senses suction line temperature
  - Cycles compressor off when suction line temperature falls below it's setpoint
  - Opens at 29°F and closes at 58°F
  - Installs on or near the discharge line of the evaporator or on the suction line

- **Refrigerant Line Kits**
  - Refrigerant lines are shipped refrigeration clean
  - Lines are cleaned, dried, pressurized and sealed at factory
  - Suction line fully insulated
  - Lines are stubbed at both ends

**NOTE** - Not available for -060 model and must be field fabricated.

**COMPRESSOR**

6. **Scroll Compressor**
   - High efficiency with uniform suction flow
   - Constant discharge flow, high volumetric efficiency and quiet operation
   - Low gas pulses during compression reduces operational sound levels
   - Compressor motor is internally protected from excessive current and temperature
   - Muffler in discharge line reduces operating sound levels
   - Compressor is installed in the unit on resilient rubber mounts for vibration free operation

- **Scroll Compressor Operation**
  - Two involute spiral scrolls matched together generate a series of crescent-shaped gas pockets between them
  - During compression, one scroll remains stationary while the other scroll orbits around it
  - Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates
  - As the spiral movement continues, gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced
  - When the pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls
  - During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle
  - Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency
  - Compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged

**Optional Accessories**

- **Crankcase Heater**
  - Protects against refrigerant migration that can occur during low ambient operation

- **Compressor Sound Cover**
  - Reinforced vinyl compressor cover
  - 1-1/2 inch thick batt fiberglass insulation
  - Hook and loop fastening tape on all open edges
CONTROLS

Defrost Control
• Control furnished as standard
• Gives a demand defrost cycle whenever system heating performance falls below optimum levels
• Sensing element on coil determines when defrost cycle is required and when to terminate cycle
• Anti-short cycle (5 minutes) incorporated into the board
• Diagnostic LEDs furnished as an aid in troubleshooting
• Conveniently located in control box

Remote Outdoor Temperature Sensor
• Used with the iComfort® M30 Smart Wi-Fi Thermostat
• Outdoor sensor allows thermostat to display outdoor temperature

NOTE: Sensor is required for the Enhanced Dehumidification Accessory (EDA).

Thermostat
• Thermostat is not furnished with unit
• See Lennox Price Book for selection

Compressor Low Ambient Cut-Off Switch
• Non-adjustable switch (low ambient cut-out) prevents compressor operation when outdoor temperature is below 35°F
• Freezestat Installs on or near the vapor line of the indoor coil or on the suction line
• Senses suction line temperature and cycles the compressor off when suction line temperature falls below its setpoint
• Opens at 29°F and closes at 58°F

Compressor Hard Start Kit
• Single-phase units are equipped with a PSC compressor motor
• This type of motor normally doesn’t need a potential relay and start capacitor
• For conditions such as low voltage kit may be required to increase the compressor starting torque

Indoor Blower Off Delay Relay
• Delays the indoor blower-off time during the cooling cycle

Low Ambient Kit
• Air conditioners can operate down to 45°F outdoor air temperature without additional controls
• Allows unit to operate properly down to 30°F

NOTE: Crankcase heater and freezestat should be installed on compressors equipped with a low ambient kit.

NOTE: A Compressor Low Ambient Cut-Off should be added to terminate compressor operation below recommended operation conditions.

Monitor Kit - Service Light
• Ambient compensating thermistor
• Service light thermostat
• For thermostats requiring indicator light inputs
• For use with thermostats requiring input for indicator lights

Mild Weather Kit
• Units can operate in the heating mode at outdoor air temperatures up to 75°F
• Field installed kit allows heating operation above 75°F

Optional Accessories

iComfort® M30 Smart Wi-Fi Thermostat
• Wi-Fi-enabled, electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat
• 4 Heat/2 Cool
• Auto-changeover
• Dual-fuel control with optional outdoor sensor
• Controls dehumidification during cooling mode and humidification during heating mode
• Offers enhanced capabilities including humidification / dehumidification / dewpoint measurement and control, Humiditrol® control, and equipment maintenance reminders
• Easy to read 4.3 in. color touchscreen (measured diagonally)
• LCD display with backlight shows the current and set temperature, time, inside relative humidity, system status (operating mode and schedules) and outside temperature (optional outdoor sensor required)
• Smooth Setback Recovery starts system early to achieve setpoint at start of program period
• Compressor short-cycle protection (5 minutes)
• Up to four separate schedules are available plus Schedule IQ™
• One-Touch Away Mode - A quick and easy way to set the cooling and heating setpoints while away
• Smart Away® - Uses geo-fencing technology to determine when the homeowner is within a predetermined distance from the home to operate the system when leaving, away and arriving
• Wi-Fi remote monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets
• Smart home automation compatible with Amazon Alexa®, Google Assistant and IFTTT
• Service Dashboard features online real-time monitoring of installed iComfort® thermostats

NOTE: See the iComfort® M30 Smart Wi-Fi Thermostat Product Specifications bulletin in the Controls section for more information.
CONTROLS (continued)

Optional Accessories (continued)

Outdoor Thermostat Kit

- An outdoor thermostat can be used to lock out some of the electric heating elements on indoor units where two-stage control is applicable.
- Outdoor thermostat maintains the heating load on the low power input as long as possible before allowing the full power load to come on the line.
- Thermostat kit and Mounting Box must be ordered separately.

CABINET

- Heavy gauge steel construction
- Louvered heavy gauge steel panels surround unit on all four sides
- Five station metal wash process
- Powder paint finish
- Control box is conveniently located with all controls factory wired
- Corner patch plate allows access to compressor components
- Drainage holes are provided in base section for moisture removal

PermaGuard™ Unit Base

- Durable zinc-coated base section resists rust and corrosion

Refrigerant Line Connections, Electrical Inlets, Service Valves

- Sweat connection suction and liquid lines
- Located on corner of unit cabinet
- Suction valve can be fully shut off, while liquid valve may be front seated to manage refrigerant charge while servicing system
- Refrigerant line connections and field wiring inlets are located in one central area of the cabinet
- See dimension drawing

Optional Accessories

Unit Stand-Off Kit

- Black high density polyethylene feet
- Raises unit off of mounting surface
- Four feet are furnished per order number
### SPECIFICATIONS

#### General Data

<table>
<thead>
<tr>
<th>Model No.</th>
<th>ML16XP1-018</th>
<th>ML16XP1-024</th>
<th>ML16XP1-030</th>
<th>ML16XP1-036</th>
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</thead>
<tbody>
<tr>
<td>Nominal Tonnage</td>
<td>1.5</td>
<td>2</td>
<td>2.5</td>
<td>3</td>
</tr>
</tbody>
</table>

1. **Sound Rating Number (dBA)**

|                | 76          | 76          | 76          | 76          |

2. **Connections (sweat)**


3. **Refrigerant**

|                | 7/8         | 6 lbs. 6 oz. | 6 lbs. 11 oz. | 7 lbs. 10 oz. | 8 lbs. 7 oz. |

1. **Outdoor Coil**

<table>
<thead>
<tr>
<th></th>
<th>Outer coil</th>
<th>Inner coil</th>
<th>Outer coil</th>
<th>Inner coil</th>
<th>Outer coil</th>
<th>Inner coil</th>
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</thead>
<tbody>
<tr>
<td>Diameter - in.</td>
<td>24.5</td>
<td>18.7</td>
<td>18.7</td>
<td>22.2</td>
<td></td>
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<tr>
<td>Tube diameter - in.</td>
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<td>5/16</td>
<td>5/16</td>
<td>5/16</td>
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<td>No. of rows</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fins per inch</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>22</td>
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<td></td>
</tr>
</tbody>
</table>

#### Outdoor Fan

<table>
<thead>
<tr>
<th></th>
<th>Diameter - in.</th>
<th>No. of blades</th>
<th>Motor hp</th>
<th>Cfm</th>
<th>Rpm</th>
<th>Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22</td>
<td>3</td>
<td>1/6</td>
<td>2670</td>
<td>867</td>
<td>160</td>
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<td></td>
<td></td>
<td>1/6</td>
<td>2575</td>
<td>866</td>
<td>163</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1/6</td>
<td>2575</td>
<td>866</td>
<td>163</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1/3</td>
<td>3700</td>
<td></td>
<td>200</td>
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</table>

#### Shipping Data - lbs. 1 pkg.

|                | 180          | 188         | 188       | 214       |

#### ELECTRICAL DATA

<table>
<thead>
<tr>
<th>Line voltage data - 60 Hz - 1 ph</th>
<th>208/230V-1ph</th>
<th>208/230V-1ph</th>
<th>208/230V-1ph</th>
<th>208/230V-1ph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum overcurrent protection (MOCP) amps</td>
<td>20</td>
<td>12.2</td>
<td>20.9</td>
<td>25</td>
</tr>
<tr>
<td>Minimum circuit ampacity (MCA)</td>
<td>20</td>
<td>25</td>
<td>35</td>
<td>48</td>
</tr>
<tr>
<td>Compressor</td>
<td>Rated load amps</td>
<td>9</td>
<td>10.1</td>
<td>12.3</td>
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<tr>
<td>Locked rotor amps</td>
<td>48</td>
<td>52</td>
<td>63</td>
<td>75</td>
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<tr>
<td>Power factor</td>
<td>0.98</td>
<td>0.98</td>
<td>0.96</td>
<td>0.99</td>
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<tr>
<td>Outdoor Fan Motor</td>
<td>Full load amps</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Locked rotor amps</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
</tr>
</tbody>
</table>

#### OPTIONAL ACCESSORIES - ORDER SEPARATELY

- **iComfort® M30 Smart Wi-Fi Thermostat**
  - 15Z69
- **Remote Outdoor Temperature Sensor**
  - X2658
- **Compressor Crankcase Heater**
  - 94M04
  - 93M05
- **Compressor Hard Start Kit**
  - LG 88M91
- **Compressor Sound Cover**
  - 18J42
- **Compressor Low Ambient Cut-Off**
  - 45F08
- **Freezestat**
  - 3/8 in. tubing 93G35
  - 5/8 in. tubing 50A93
- **Indoor Blower Off Delay Relay**
  - 58M81
- **Loss of Charge Switch Kit**
  - 84M23
- **Low Ambient Kit**
  - 54M89
- **Mild Weather Kit**
  - 11B97
- **Monitor Kit - Service Light**
  - 76F53
- **Outdoor Thermostat Kit**
  - Thermostat 10Z23
  - Mounting Box 31461
- **Refrigerant Line Sets**
  - L15-41-20
  - L15-41-40
  - L15-41-30
  - L15-41-50
  - L15-65-30
  - L15-65-40
  - L15-65-50
- **Unit Stand-Off Kit**
  - 94J45

1. Sound Rating Number rated in accordance with test conditions included in AHRI Standard 270.
2. Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the Installation Instructions for information about line set length and additional refrigerant charge required.
3. HACR type breaker or fuse.
4. Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.
5. Crankcase Heater and Freezestat are recommended with Low Ambient Kit.

**NOTE** - Extremes of operating range are plus 10% and minus 5% of line voltage.
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>General Data</th>
<th>Model No.</th>
<th>ML16XP1-042</th>
<th>ML16XP1-048</th>
<th>ML16XP1-060</th>
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<tbody>
<tr>
<td>Nominal Tonnage</td>
<td></td>
<td>3.5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Sound Rating Number (dBA)</td>
<td>79</td>
<td>80</td>
<td>80</td>
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<tr>
<td>Connections (sweat)</td>
<td>Liquid line (o.d.) - in.</td>
<td>3/8</td>
<td>3/8</td>
<td>3/8</td>
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<tr>
<td></td>
<td>Vapor (Suction) line (o.d.) - in.</td>
<td>7/8</td>
<td>7/8</td>
<td>1-1/8</td>
</tr>
<tr>
<td>Refrigerant</td>
<td>R-410A charge furnished</td>
<td>10 lbs. 12 oz.</td>
<td>10 lbs. 7 oz.</td>
<td>10 lbs. 4 oz.</td>
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<tr>
<td>Outdoor Coil</td>
<td>Net face area- sq. ft.</td>
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<td>29.1</td>
<td>29.1</td>
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<td></td>
<td>Outer coil</td>
<td>28.2</td>
<td>28.2</td>
<td>28.2</td>
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<tr>
<td></td>
<td>Inner coil</td>
<td>5/16</td>
<td>5/16</td>
<td>5/16</td>
</tr>
<tr>
<td></td>
<td>No. of rows</td>
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<td>2</td>
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<tr>
<td></td>
<td>Fins per inch</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Outdoor Fan</td>
<td>Diameter - in.</td>
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<td>26</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>No. of blades</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Motor hp</td>
<td>1/3</td>
<td>1/3</td>
<td>1/3</td>
</tr>
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<td></td>
<td>Cfm</td>
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<td></td>
<td>Rpm</td>
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<tr>
<td></td>
<td>Watts</td>
<td>216</td>
<td>216</td>
<td>245</td>
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<tr>
<td>Shipping Data - lbs. 1 pkg.</td>
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<td>263</td>
<td>268</td>
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## ELECTRICAL DATA

<table>
<thead>
<tr>
<th>Line voltage data - 60 Hz - 1 ph</th>
<th>208/230V-1ph</th>
<th>208/230V-1ph</th>
<th>208/230V-1ph</th>
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<tr>
<td>Maximum overcurrent protection (MOCP) amps</td>
<td>40</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Minimum circuit ampacity (MCA)</td>
<td>25</td>
<td>25.8</td>
<td>30.4</td>
</tr>
<tr>
<td>Compressor Rated load amps</td>
<td>15.9</td>
<td>18.5</td>
<td>22.2</td>
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<tr>
<td>Locked rotor amps</td>
<td>112.3</td>
<td>124</td>
<td>127.9</td>
</tr>
<tr>
<td>Power factor</td>
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<td>0.99</td>
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<tr>
<td>Outdoor Fan Motor Full load amps</td>
<td>2.6</td>
<td>2.6</td>
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</table>

## OPTIONAL ACCESSORIES - ORDER SEPARATELY

- iComfort® M30 Smart Wi-Fi Thermostat 15Z69
- Remote Outdoor Temperature Sensor X2658
- Compressor Crankcase Heater 93M05
- Compressor Hard Start Kit LG 88M91
- Copeland 10J42
- Compressor Sound Cover 18J42
- Compressor Low Ambient Cut-Off 45F08
- Freezestat 3/8 in. tubing 93G35
- 5/8 in. tubing 50A93
- Indoor Blower Off Delay Relay 58M81
- Loss of Charge Switch Kit 84M23
- Low Ambient Kit 54M89
- Mild Weather Kit 11B97
- Monitor Kit - Service Light 76F53
- Outdoor Thermostat Kit 10Z23
- Mounting Box 31461
- Field Fabricate
- Unit Stand-Off Kit 94J45

**NOTE** - Extremes of operating range are plus 10% and minus 5% of line voltage.

1 Sound Rating Number rated in accordance with test conditions included in AHRI Standard 270.

2 Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the Installation Instructions for information about line set length and additional refrigerant charge required.

3 HACR type breaker or fuse.

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

5 Crankcase Heater and Freezestat are recommended with Low Ambient Kit
## SOUND DATA

<table>
<thead>
<tr>
<th>Unit Model</th>
<th>Octave Band Sound Power Levels dBA, re 10⁻¹² Watts</th>
<th>Center Frequency - HZ</th>
<th>Sound Rating Number (dBA)</th>
<th>Estimated Sound Pressure Level at Distance From Unit (dBA at distance in ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>125</td>
<td>250</td>
<td>500</td>
<td>1000</td>
</tr>
<tr>
<td>018</td>
<td>59.5</td>
<td>65</td>
<td>71</td>
<td>70.5</td>
</tr>
<tr>
<td>024</td>
<td>56</td>
<td>66</td>
<td>73</td>
<td>71.5</td>
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<td>030</td>
<td>56</td>
<td>66</td>
<td>73</td>
<td>71.5</td>
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<td>042</td>
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<tr>
<td>060</td>
<td>65.5</td>
<td>70.5</td>
<td>73</td>
<td>73</td>
</tr>
</tbody>
</table>

1. Octave Band Sound Power Levels dBA, re 10⁻¹² Watts with Center Frequency - HZ.
2. Estimated Sound Pressure Level at Distance From Unit (dBA at distance in ft.).

NOTE - the octave sound power data does not include tonal correction.

1. Tested according to AHRI Standard 270-2008 test conditions.
2. Estimated sound pressure level at distance based on AHRI Standard 275-2010 method for equipment located on the ground, roof, or on side of building wall with no adjacent reflective surface within 9.8 feet. Sound pressure levels will increase based on changes to assumptions. For other applications, refer to AHRI Standard 275.

## FIELD WIRING

A - Two Wire Power (see Electrical Data)
B - Two or Three Wire Power (size to heater capacity)
C - Twelve Wire Low Voltage 18 ga. minimum
   Fourteen Wire Low Voltage with Optional Outdoor Thermostat
D - Eight Wire Low Voltage 18 ga. minimum
   Ten Wire Low Voltage with Optional Outdoor Thermostat

**NOTE** - Field Wiring Not Furnished

All wiring must conform to NEC or CEC and local electrical codes.

## INSTALLATION CLEARANCES

**NOTES:**

Service clearance of 30 in. (762 mm) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 36 in. (914 mm)

Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

A clearance of 24 in. must be maintained between two units.

48 in. (1219 mm) clearance required on top of unit.
**DIMENSIONS - UNIT**

**SIDE VIEW**
- **OUTDOOR COIL FAN**
- **COMPRESSOR**
- **SUCTION AND LIQUID LINE CONNECTION**
- **ELECTRICAL INLETS**
- **OPTIONAL UNIT STAND-OFF KIT (4) (FIELD INSTALLED)**

**TOP VIEW**
- **INLET AIR**
- **SUCTION LINE CONNECTION**
- **LIQUID LINE CONNECTION**

**TOP VIEW BASE SECTION**
- **INLET AIR**
- **SUCTION LINE CONNECTION**
- **LIQUID LINE CONNECTION**
- **OPTIONAL UNIT STAND-OFF KIT (4) (FIELD INSTALLED)**
- **COIL DRAIN OUTLETS (Around perimeter of base)**

**SIDE VIEW BASE SECTION**
- **INLET AIR**
- **SUCTION LINE CONNECTION**
- **LIQUID LINE CONNECTION**
- **OPTIONAL UNIT STAND-OFF KIT (4) (FIELD INSTALLED)**

**DIMENSIONS - UNIT**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML16XP1-018</td>
<td>28-1/4</td>
<td>718</td>
<td>43-1/4</td>
</tr>
<tr>
<td>ML16XP1-024</td>
<td>28-1/4</td>
<td>718</td>
<td>33-1/4</td>
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<td>ML16XP1-030</td>
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<td>33-1/4</td>
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<td>ML16XP1-036</td>
<td>32-1/4</td>
<td>817</td>
<td>33-1/4</td>
</tr>
<tr>
<td>ML16XP1-042</td>
<td>32-1/4</td>
<td>817</td>
<td>43-1/4</td>
</tr>
<tr>
<td>ML16XP1-048</td>
<td>32-1/4</td>
<td>817</td>
<td>43-1/4</td>
</tr>
<tr>
<td>ML16XP1-060</td>
<td>32-1/4</td>
<td>817</td>
<td>43-1/4</td>
</tr>
</tbody>
</table>
### TXV USAGE

Use this table for C35, CH23, CH35 and CR33 Field Installed TXV Match-Ups

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML16XP1-018</td>
<td>12J18</td>
</tr>
<tr>
<td>ML16XP1-024</td>
<td>12J18</td>
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<tr>
<td>ML16XP1-030</td>
<td>12J18</td>
</tr>
<tr>
<td>ML16XP1-036</td>
<td>12J19</td>
</tr>
<tr>
<td>ML16XP1-042</td>
<td>12J20</td>
</tr>
<tr>
<td>ML16XP1-048</td>
<td>12J20</td>
</tr>
<tr>
<td>ML16XP1-060</td>
<td>12J20</td>
</tr>
</tbody>
</table>

CX35 and CHX35 coils and all Lennox air handlers are shipped with a factory installed TXV.

C35 and CH35 coils - Replace the factory installed RFC orifice with the expansion valve listed.

CH23 and CR33 - Use the expansion valve listed.

### MOST POPULAR MATCHES

<table>
<thead>
<tr>
<th>Outdoor Unit Model No.</th>
<th>Indoor Unit Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML16XP1-018</td>
<td>CBA27UHE-018</td>
</tr>
<tr>
<td>ML16XP1-024</td>
<td>CBA27UHE-024</td>
</tr>
<tr>
<td>ML16XP1-030</td>
<td>CBA27UHE-030</td>
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<tr>
<td>ML16XP1-036</td>
<td>CBA27UHE-036</td>
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<td>ML16XP1-042</td>
<td>CBA27UHE-048</td>
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<td>ML16XP1-048</td>
<td>CBA27UHE-048</td>
</tr>
<tr>
<td>ML16XP1-060</td>
<td>CBA27UHE-060</td>
</tr>
</tbody>
</table>

### AHRI STANDARD 210/240

Cooling or heating capacities are net values, including the effects of blower motor heat, and do not include supplementary heat. Power input is the total power input to the compressor(s) and fan(s), plus any controls and other items required as part of the system for normal operation.

Units which do not have an indoor air-circulating blower furnished as part of the model, i.e., split system with indoor coil only, is established by subtracting from the total cooling capacity 1250 Btu/h per 1,000 cfm, and by adding the same amount to the heating capacity. Total power input for both heating and cooling is increased by 365 W per 1,000 cfm of indoor air circulated.

### TXV RANGES:

- **12J18** - 1.5 to 2.5 ton systems - Use on 2.5 ton (030) and lower systems.
- **12J19** - 3 ton systems - Use down to 2 ton (024) systems.
- **12J20** - 3.5 to 5 ton systems - Use down to 3 ton (036) systems.

### TXV SUBSTITUTION

A general guide for replacing the factory installed TXV if the indoor unit (coil/air handler) is larger or smaller than the outdoor unit.

<p>| Outdoor Unit Size Tons Indoor Unit Size Tons TXV Furnished TXV Replacement |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 018 1.5 30/36 2.5/3      | 12J19                    | 12J18                    |
| 018 1.5 36 3            | 12J19                    | 12J18                    |
| 018 1.5 42 3.5          | 12J20                    | 12J18                    |
| 018 1.5 48 4           | 12J20                    | 12J18                    |
| 018 1.5 49 4           | 12J20                    | 12J18                    |
| 018 1.5 50/60 4/5      | 12J20                    | 12J18                    |
| 018 1.5 51/61 4/5      | 12J20                    | 12J18                    |
| 018 1.5 60 5          | 12J20                    | 12J18                    |
| 024 2 42 3.5        | 12J20                    | 12J18                    |
| 024 2 48 4          | 12J20                    | 12J18                    |
| 024 2 49 4          | 12J20                    | 12J18                    |
| 024 2 50/60 5        | 12J20                    | 12J18                    |
| 024 2 51/61 5        | 12J20                    | 12J18                    |
| 024 2 60 5          | 12J20                    | 12J18                    |
| 030 2.5 42 3.5       | 12J20                    | 12J18                    |
| 030 2.5 43 3.5       | 12J20                    | 12J18                    |
| 030 2.5 48 4         | 12J20                    | 12J18                    |
| 030 2.5 49 4         | 12J20                    | 12J18                    |
| 036 3 24 2          | 12J18                    | 12J19                    |
| 036 3 30 2.5        | 12J18                    | 12J19                    |
| 042 3.5 24 2        | 12J18                    | 12J20                    |
| 042 3.5 30 2.5      | 12J18                    | 12J20                    |
| 042 3.5 30/36 3      | 12J19                    | 12J20                    |
| 042 3.5 36 3        | 12J19                    | 12J20                    |
| 048 4 30/36 2.5/3   | 12J19                    | 12J20                    |
| 048 4 36 3          | 12J19                    | 12J20                    |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TXV Substitution</td>
<td>Updated.</td>
</tr>
</tbody>
</table>