MAINLINE®
Reliably Comfortable.™

# Elite® Series iM Heat Pumps

## MLP14AY

Cooling Efficiencies up to: 15.2 SEER2 / 11.7 EER2
Heating Efficiencies up to: 7.8 HSPF2
Nominal Sizes: 1.5 to 5 Tons [5.3 to 17.6 kW]
Cooling & Heating Capacities: 17.1 kBTU to 54.0 kBTU [5.0 kW to 15.8 kW]
Refrigerant Type: R-454B

Manufactured for
**Mainline®**
HVACmainline.com

ISO 9001:2015

AHRI CERTIFIED
Unitary Small AC
AHRI Standard 210/240

c UL us LISTED

ENERGY STAR

***Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps must be matched with appropriate coil components to meet ENERGY STAR®. Ask your Contractor for details or visit www.energystar.gov.***

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# Features and Benefits

- **Two-Stage Scroll Compressor[1]:** Features two speeds (high and low) of cooling and heating, providing more precise temperature control, lower humidity and greater efficiency when compared to single stage compressors
- **Inverted Reversing Valve:** Allows for faster heat transfer with gravity assist shifting and reduced joint stress for increased reliability
- **Expanded Valve Space:** 3 in. – 4 in. – 5 in. service valve space—provides a minimum working area of 27-square inches for easier access
- **Triple Service Access:** 15 in. wide, industry leading corner service access, makes repairs easier and faster
- **Designing for Sustainability with Low GWP:** For 2025, the Environmental Protection Agency (EPA) has set a global warming potential (GWP) limit of 700 for refrigerant used in heating and cooling systems. This new requirement will result in a 78%[2] lower GWP than previous-generation refrigerants — with only minimal changes to system installation. For us, this is another step toward our continued sustainability goal of reducing greenhouse gas emissions, while still delivering an exceptional level of energy efficient, dependable comfort
- **Refrigerant Detection System[3]:** An integrated one-box, patented design featuring the A2L sensor and mitigation board, offering easier commissioning with a single component and simplified wiring configuration, compatibility with any 24V thermostat application and system protection by automatically pausing outdoor unit operation — if excess refrigerant is detected

[1]Does not apply to the 1.5 Ton 1-stage model

[2]When comparing the GWP of R-454B to R-410A refrigerant

[3]Factory or field installed in the furnace coil or air handler and is applicable to the complete heating and cooling system featuring Low GWP Refrigerant (A2L)

# Heat Pumps

| ML | P | 14 | A | Y | 18 | A | J | 1 | N | A |
|---|---|---|---|---|---|---|---|---|---|---|
| **Brand** | **Product Category** | **SEER2** | **Region** | **Refrigerant** | **Capacity** | **Major Series** | **Voltage** | **Type** | **Controls** | **Minor Series** |
| ML - Mainline | P - Heat Pump | 14 - 14.3 SEER2 | A - All Regions | Y - R-454B | 18 - 18,000 [5.28 kW]<br>24 - 24,000 [7.03 kW]<br>30 - 30,000 [8.79 kW]<br>36 - 36,000 [10.55 kW]<br>42 - 42,000 [12.31 kW]<br>48 - 48,000 [14.07 kW]<br>60 - 60,000 [17.58 kW] | A - 1st Design | J - 1ph, 208/230/60<br>C - 3ph, 208/230/60<br>D - 3ph, 460/60 | 1 - 1-Stage<br>2 - 2-Stage | N - Non-Comm. | A - 1st Design |

**[ ] Designates Metric Conversions**

| AVAILABLE MODELS | DESCRIPTION |
|---|---|
| MLP14AY18AJ2NA | 1 1/2 ton 14.3 SEER2 1-Stage iM Heat Pump-208/230/1/60 |
| MLP14AY24AJ2NA | 2 ton 14.3 SEER2 2-Stage Heat iM Pump-208/230/1/60 |
| MLP14AY30AJ2NA | 2 1/2 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/1/60 |
| MLP14AY36AJ2NA | 3 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/1/60 |
| MLP14AY42AJ2NA | 3 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/3/60 |
| MLP14AY48AJ2NA | 3 ton 14.3 SEER2 2-Stage iM Heat Pump-460/3/60 |
| MLP14AY60AJ2NA | 3 1/2 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/1/60 |
| MLP14AY36AC2NA | 3 1/2 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/3/60 |
| MLP14AY36AD2NA | 3 1/2 ton 14.3 SEER2 2-Stage iM Heat Pump-460/3/60 |
| MLP14AY42AC2NA | 4 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/1/60 |
| MLP14AY42AD2NA | 4 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/3/60 |
| MLP14AY48AC2NA | 4 ton 14.3 SEER2 2-Stage iM Heat Pump-460/3/60 |
| MLP14AY48AD2NA | 5 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/1/60 |
| MLP14AY60AC2NA | 5 ton 14.3 SEER2 2-Stage iM Heat Pump-208/230/3/60 |
| MLP14AY60AD2NA | 5 ton 14.3 SEER2 2-Stage iM Heat Pump-460/3/60 |

| STANDARD EQUIPMENT |
|---|
| R-454B Refrigerant |
| Scroll Compressor |
| Field Installed Filter Drier |
| Front Seating Service Valves |
| Internal Pressure Relief Valve |
| Internal Thermal Overload |
| Long Line capability |
| Low Ambient capability with Kit |
| 3-4-5 Expanded Valve Space |
| Composite Basepan |
| 2 Screw Control Box Access |
| 15" Access to Internal Components |
| No fasteners to remove along bottom |
| Optimized Venturi Airflow |
| Powder coated paint |
| Rust resistant screws |
| QR code |
| External gauge ports |
| Service trays |

## General Data

| MODEL NO. | MLP14AY18A | MLP14AY24A | MLP14AY30A | MLP14AY36A | MLP14AY42A | MLP14AY48A | MLP14AY60A |
|---|---|---|---|---|---|---|---|
| **Nominal Tonnage** | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 5.0 |
| **Valve Connections** | | | | | | | |
| Liquid Line O.D. – in. | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 |
| Suction Line O.D. – in. | 3/4 | 3/4 | 3/4 | 3/4 | 7/8 | 7/8 | 7/8 |
| **Refrigerant (R-454B) furnished oz.[1]** | 83 | 83 | 99 | 94 | 130 | 115 | 194 |
| **Compressor Type** | Scroll | | | | | | |
| **Outdoor Coil** | | | | | | | |
| Net face area – Outer Coil | 10.9 | 10.9 | 14.4 | 19.5 | 19.5 | 19.5 | 23.4 |
| Net face area – Inner Coil | — | — | — | — | — | — | 22.7 |
| Tube diameter – in. | 0.276 | 0.276 | 0.276 | 0.276 | 0.276 | 0.276 | 0.276 |
| Number of rows | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Fins per inch | 22 | 22 | 22 | 22 | 22 | 24 | 22 |
| **Outdoor Fan** | | | | | | | |
| Diameter – in. | 20 | 20 | 24 | 24 | 24 | 24 | 26 |
| Number of blades | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Motor hp | 1/7 | 1/6 | 1/5 | 1/5 | 1/5 | 1/5 | 1/5 |
| CFM | 2401 | 2620 | 3391 | 4077 | 4077 | 4096 | 4396 |
| RPM | 1075 | 1075 | 850 | 850 | 850 | 850 | 850 |
| Watts | 146 | 145 | 175 | 234 | 222 | 236 | 284 |
| **Shipping weight – lbs.** | 160 | 160 | 196 | 209 | 239 | 243 | 282 |
| **Operating weight – lbs.** | 153 | 153 | 189 | 202 | 232 | 236 | 275 |

## Electrical Data

| **Line Voltage Data (Volts-Phase-Hz)** | **208/230-1-60** | **208/230-1-60** | **208/230-1-60** | **208/230-1-60** | **208/230-1-60** | **208/230-1-60** | **208/230-1-60** |
|---|---|---|---|---|---|---|---|
| **Maximum overcurrent protection (amps)[2]** | 20 | 25 | 30 | 30 | 40 | 45 | 50 |
| **Minimum circuit ampacity[3]** | 13 | 16 | 20 | 20 | 24 | 27 | 33 |
| **Compressor** | | | | | | | |
| Rated load amps | 10 | 12 | 15 | 15 | 18 | 20 | 25 |
| Locked rotor amps | 52 | 65 | 82 | 90 | 106 | 141 | 147 |
| **Condenser Fan Motor** | | | | | | | |
| Full load amps | 0.75 | 0.75 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Locked rotor amps | 1.4 | 1.5 | 2.6 | 2.56 | 2.56 | 2.56 | 2.6 |
| **Line Voltage Data (Volts-Phase-Hz)** | | | | **208/230-3-60** | **208/230-3-60** | **208/230-3-60** | **208/230-3-60** |
| **Maximum overcurrent protection (amps)[2]** | | | | 20 | 25 | 25 | 30 |
| **Minimum circuit ampacity[3]** | | | | 13 | 16 | 17 | 19 |
| **Compressor** | | | | | | | |
| Rated load amps | | | | 9.4 | 11.2 | 10.8 | 13.8 |
| Locked rotor amps | | | | 82 | 123 | 123 | 150 |
| **Condenser Fan Motor** | | | | | | | |
| Full load amps | | | | 1.0 | 1.0 | 1.0 | 1.0 |
| Locked rotor amps | | | | 2.60 | 2.60 | 2.60 | 2.6 |
| **Line Voltage Data (Volts-Phase-Hz)** | | | | **460-3-60** | **460-3-60** | **460-3-60** | **460-3-60** |
| **Maximum overcurrent protection (amps)[2]** | | | | 15 | 15 | 15 | 15 |
| **Minimum circuit ampacity[3]** | | | | 7 | 9 | 10 | 10 |
| **Compressor** | | | | | | | |
| Rated load amps | | | | 5 | 5.8 | 7.1 | 6.5 |
| Locked rotor amps | | | | 44 | 60 | 60 | 60 |
| **Condenser Fan Motor** | | | | | | | |
| Full load amps | | | | 0.8 | 1.0 | 1.0 | 1.0 |
| Locked rotor amps | | | | 1.4 | 1.4 | 1.4 | 1.4 |

[1]Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the installation instructions for information about set length and additional refrigerant charge required.
[2]HACR type circuit breaker of fuse.
[3]Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements.

# Accessories

| MODEL NO. | | MLP14AY18A | MLP14AY24A | MLP14AY30A | MLP14AY36A | MLP14AY42A | MLP14AY48A | MLP14AY60A |
|---|---|---|---|---|---|---|---|---|
| Compressor crankcase heater* | | 44-17402-44 | 44-17402-44 | 44-17402-44 | 44-17402-44 | 44-17402-45 | 44-17402-45 | Factory Standard |
| Low ambient control | | RXAD-A08 | RXAD-A08 | RXAD-A08 | RXAD-A08 | RXAD-A08 | RXAD-A08 | RXAD-A08 |
| Compressor sound cover | | 68-23427-26 | 68-23427-26 | 68-23427-26 | 68-23427-26 | 68-23427-25 | 68-23427-25 | 68-23427-25 |
| Compressor hard start kit | | SK-A1 | SK-A1 | SK-A1 | SK-A1 | SK-A1 | SK-A1 | SK-A1 |
| Low pressure control | | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard |
| High pressure control | | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard |
| Liquid Line Solenoid (24 VAC, 50/60 Hz) | Solenoid Valve | 200RD2T3TVLC | 200RD2T3TVLC | 200RD2T3TVLC | 200RD2T3TVLC | 200RD2T3TVLC | 200RD3T3TVLC | 200RD3T3TVLC |
| | Solenoid Coil | 61-AMG24V | 61-AMG24V | 61-AMG24V | 61-AMG24V | 61-AMG24V | 61-AMG24V | 61-AMG24V |
| Liquid Line Solenoid (120/240 VAC, 50/60 Hz) | Solenoid Valve | 200RD2T3TVLC | 200RD2T3TVLC | 200RD2T3TVLC | 200RD2T3TVLC | 200RD2T3TVLC | 200RD3T3TVLC | 200RD3T3TVLC |
| | Solenoid Coil | 61-AMG120/240V | 61-AMG120/240V | 61-AMG120/240V | 61-AMG120/240V | 61-AMG120/240V | 61-AMG120/240V | 61-AMG120/240V |

*Bi-flow kits are required when installing a liquid line solenoid on a heat pump.

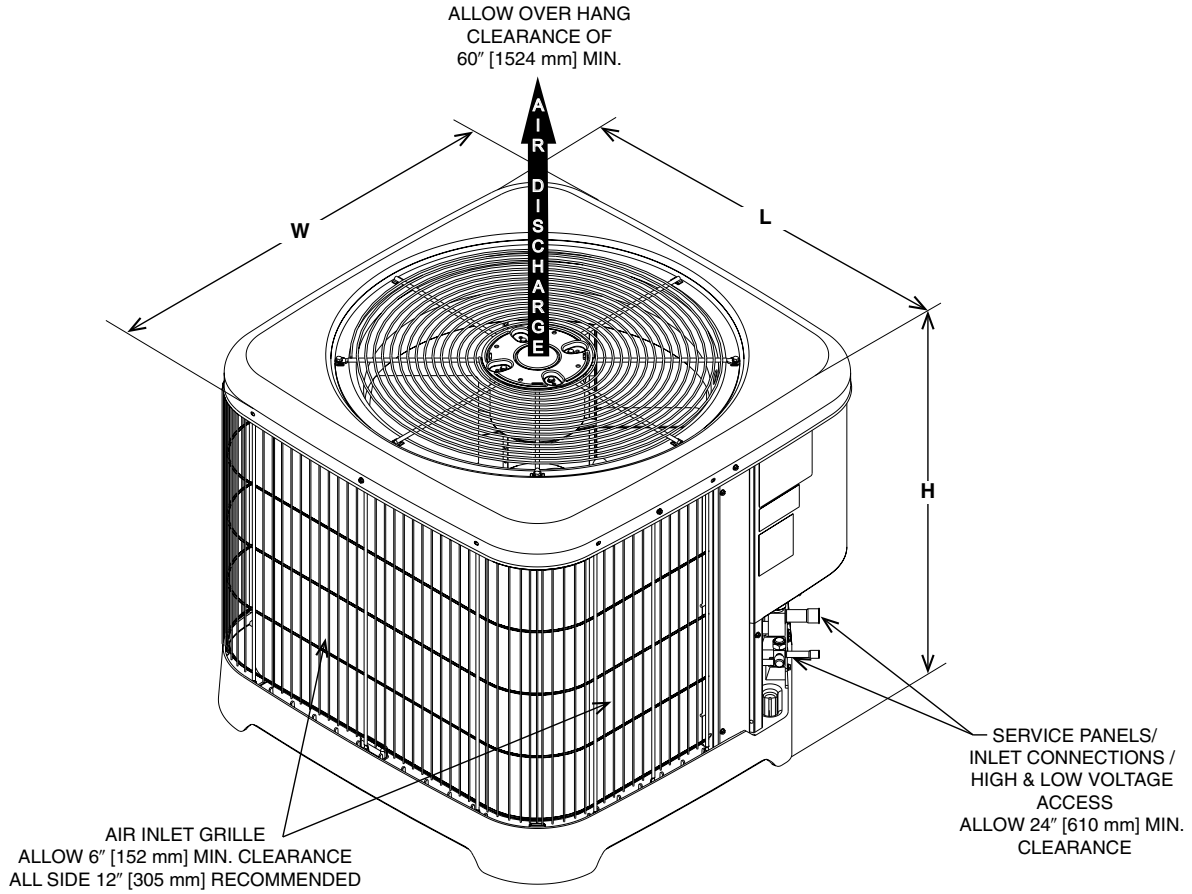
# Weighted Sound Power Level (dBA)

| UNIT SIZE - VOLTAGE, SERIES | STANDARD RATING (DBA) | TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| MLP14AY18A | 73 | 39.8 | 55.0 | 62.1 | 67.0 | 60.0 | 57.4 | 51.2 |
| MLP14AY24A | 73 | 40.4 | 55.4 | 62.5 | 65.9 | 58.7 | 56.4 | 48.9 |
| MLP14AY30A | 72 | 48.9 | 55.3 | 63.6 | 61.0 | 59.1 | 56.5 | 48.7 |
| MLP14AY36A | 72 | 50.1 | 55.8 | 64.4 | 61.5 | 58.7 | 55.1 | 50.9 |
| MLP14AY42A | 72 | 48.6 | 56.2 | 63.1 | 61.7 | 60.0 | 56.0 | 50.0 |
| MLP14AY48A | 74 | 49.3 | 56.0 | 64.5 | 64.5 | 60.1 | 54.9 | 47.7 |
| MLP14AY60A | 74 | 43.9 | 55.2 | 63.4 | 65.8 | 61.7 | 57.9 | 52.9 |

**NOTE:** Tested in accordance with AHRI Standard 270-08 (not listed in AHRI)

# Unit Dimensions

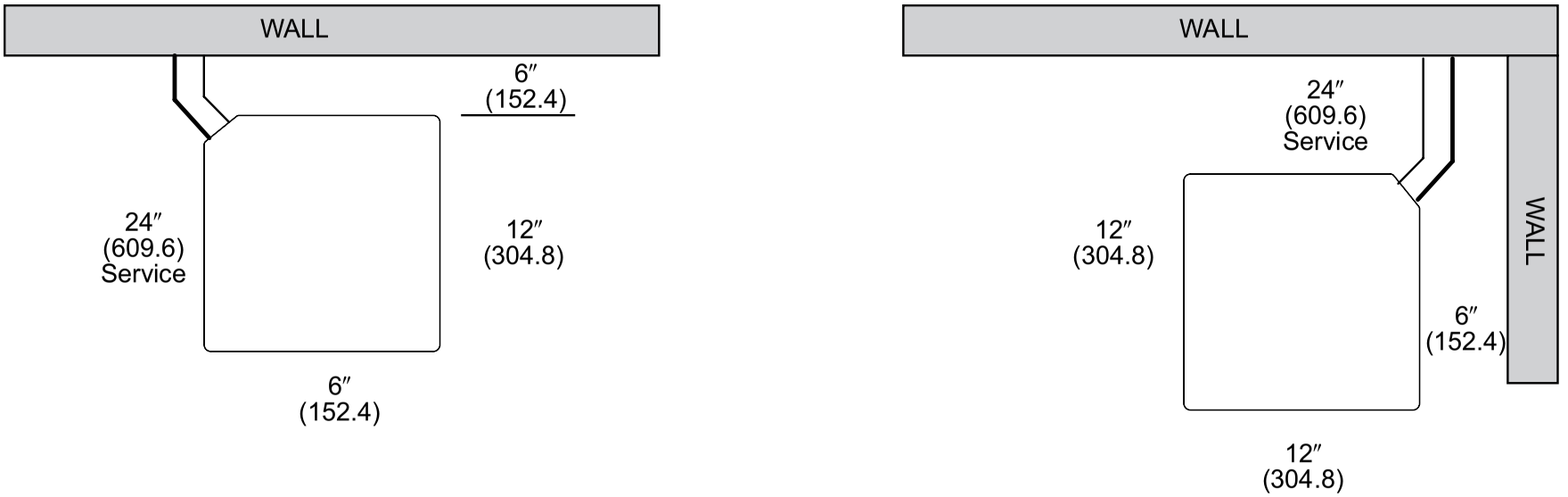
| MODEL NO. | OPERATING | | | | | | SHIPPING | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H (Height) | | L (Length) | | W (Width) | | H (Height) | | L (Length) | | W (Width) | |
| | INCHES | mm | INCHES | mm | INCHES | mm | INCHES | mm | INCHES | mm | INCHES | mm |
| MLP14AY18A | 25.00 | 635 | 29.75 | 756 | 29.75 | 756 | 26.50 | 673 | 32.38 | 822 | 32.38 | 822 |
| MLP14AY24A | 25.00 | 635 | 29.75 | 756 | 29.75 | 756 | 26.50 | 673 | 32.38 | 822 | 32.38 | 822 |
| MLP14AY30A | 27.00 | 686 | 33.75 | 857 | 33.75 | 857 | 28.50 | 724 | 36.38 | 924 | 36.38 | 924 |
| MLP14AY36A | 35.00 | 889 | 33.75 | 857 | 33.75 | 857 | 36.50 | 927 | 36.38 | 924 | 36.38 | 924 |
| MLP14AY42A | 35.00 | 889 | 33.75 | 857 | 33.75 | 857 | 36.50 | 927 | 36.38 | 924 | 36.38 | 924 |
| MLP14AY48A | 35.00 | 889 | 33.75 | 857 | 33.75 | 857 | 36.50 | 927 | 36.38 | 924 | 36.38 | 924 |
| MLP14AY60A | 39.00 | 991 | 35.75 | 908 | 35.75 | 908 | 40.50 | 1029 | 38.38 | 975 | 38.38 | 975 |




**[ ] Designates Metric Conversions**

ST-A1226-24-00

# CLEARANCES




NOTE: NUMBERS IN () = mm

IMPORTANT: When installing multiple units in an alcove, roof well or partially enclosed area, ensure there is adequate ventillation to prevent re-circulation of discharge air.

# Refrigerant Line Size Information

| TWO-STAGE HEAT PUMPS | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UNIT SIZE | ALLOWABLE LIQUID LINE SIZE | ALLOWABLE SUCTION LINE SIZE | OUTDOOR UNIT ABOVE OR BELOW INDOOR UNIT EQUIVALENT LENGTH (FEET) | | | | | | | | | |
| | | | 0-25 | 26-50 | 51-75 | 76-100 | 101-125 | 126-150 | 151-175 | 176-200 | 201-225 | 226-250 |
| | | | MAXIMUM VERTICAL SEPARATION / CAPACITY MULTIPLIER | | | | | | | | | |
| 1.5 Ton | 1/4" | 1/2" | 25/1 | 50/0.98 | 66/0.97 | 47/0.95 | 27/0.94 | 7/0.92 | 0/0.91 | 0/0.89 | 0/0.88 | 0/0.87 |
| | 5/16" | 1/2" | 25/1 | 50/0.98 | 75/0.97 | 100/0.95 | 99/0.94 | 94/0.92 | 89/0.91 | 84/0.89 | 79/0.88 | 76/0.87 |
| | 3/8" | 1/2" | 25/1 | 50/0.98 | 75/0.97 | 100/0.95 | 117/0.94 | 116/0.92 | 115/0.91 | 113/0.89 | 111/0.88 | 110/0.87 |
| | 1/4" | 5/8" | 25/1 | 50/1 | 66/0.99 | 47/0.99 | 27/0.98 | 7/0.98 | 0/0.97 | 0/0.97 | 0/0.97 | 0/0.96 |
| | 5/16" | 5/8" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 99/0.98 | 94/0.98 | 89/0.97 | 84/0.97 | 79/0.97 | 76/0.96 |
| | 3/8" | 5/8" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 117/0.98 | 116/0.98 | 115/0.97 | 113/0.97 | 111/0.97 | 110/0.96 |
| | 1/4" | 3/4" | 25/1 | 50/1 | 66/1 | 47/1 | 27/0.99 | 7/0.99 | 0/0.99 | 0/0.99 | 0/0.99 | 0/0.99 |
| | 5/16" | 3/4" | 25/1 | 50/1 | 75/1 | 100/1 | 99/0.99 | 94/0.99 | 89/0.99 | 84/0.99 | 79/0.99 | 76/0.99 |
| | 3/8" | 3/4" | 25/1 | 50/1 | 75/1 | 100/1 | 117/0.99 | 116/0.99 | 115/0.99 | 113/0.99 | 111/0.99 | 110/0.99 |
| 2 Ton | 1/4" | 5/8" | 25/1 | 50/0.99 | 33/0.98 | 3/0.98 | 0/0.97 | 0/0.96 | 0/0.95 | 0/0.95 | 0/0.94 | 0/0.94 |
| | 5/16" | 5/8" | 25/1 | 50/0.99 | 75/0.98 | 91/0.98 | 82/0.97 | 73/0.96 | 65/0.95 | 56/0.95 | 48/0.94 | 42/0.94 |
| | 3/8" | 5/8" | 25/1 | 50/0.99 | 75/0.98 | 100/0.98 | 110/0.97 | 107/0.96 | 104/0.95 | 101/0.95 | 98/0.94 | 95/0.94 |
| | 1/4" | 3/4" | 25/1 | 50/1 | 33/0.99 | 3/0.99 | 0/0.99 | 0/0.99 | 0/0.98 | 0/0.98 | 0/0.98 | 0/0.98 |
| | 5/16" | 3/4" | 25/1 | 50/1 | 75/0.99 | 91/0.99 | 82/0.99 | 73/0.99 | 65/0.98 | 56/0.98 | 48/0.98 | 42/0.98 |
| | 3/8" | 3/4" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 110/0.99 | 107/0.99 | 104/0.98 | 101/0.98 | 98/0.98 | 95/0.98 |
| 2.5 Ton | 1/4" | 5/8" | 25/1 | 42/0.99 | 1/0.98 | 0/0.97 | 0/0.95 | 0/0.94 | 0/0.93 | 0/0.92 | 0/0.91 | 0/0.9 |
| | 5/16" | 5/8" | 25/1 | 50/0.99 | 75/0.98 | 73/0.97 | 60/0.95 | 47/0.94 | 34/0.93 | 22/0.92 | 10/0.91 | 1/0.9 |
| | 3/8" | 5/8" | 25/1 | 50/0.99 | 75/0.98 | 100/0.97 | 103/0.95 | 98/0.94 | 93/0.93 | 89/0.92 | 85/0.91 | 80/0.9 |
| | 1/4" | 3/4" | 25/1 | 42/1 | 1/0.99 | 0/0.99 | 0/0.98 | 0/0.98 | 0/0.97 | 0/0.97 | 0/0.97 | 0/0.96 |
| | 5/16" | 3/4" | 25/1 | 50/1 | 75/0.99 | 73/0.99 | 60/0.98 | 47/0.98 | 34/0.97 | 22/0.97 | 10/0.97 | 1/0.96 |
| | 3/8" | 3/4" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 103/0.98 | 98/0.98 | 93/0.97 | 89/0.97 | 85/0.97 | 80/0.96 |
| 3 Ton | 5/16" | 5/8" | 25/1 | 50/0.98 | 71/0.97 | 53/0.95 | 35/0.93 | 17/0.92 | 0/0.9 | 0/0.89 | 0/0.87 | 0/0.87 |
| | 3/8" | 5/8" | 25/1 | 50/0.98 | 75/0.97 | 100/0.95 | 94/0.93 | 87/0.92 | 81/0.9 | 75/0.89 | 68/0.87 | 62/0.87 |
| | 5/16" | 3/4" | 25/1 | 50/0.99 | 71/0.99 | 53/0.98 | 35/0.98 | 17/0.97 | 0/0.96 | 0/0.96 | 0/0.95 | 0/0.95 |
| | 3/8" | 3/4" | 25/1 | 50/0.99 | 75/0.99 | 100/0.98 | 94/0.98 | 87/0.97 | 81/0.96 | 75/0.96 | 68/0.95 | 62/0.95 |
| | 1/2" | 3/4" | 25/1 | 50/0.99 | 75/0.99 | 100/0.98 | 119/0.98 | 118/0.97 | 116/0.96 | 115/0.96 | 114/0.95 | 113/0.95 |
| | 3/8" | 7/8" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 94/0.99 | 87/0.99 | 81/0.98 | 75/0.98 | 68/0.98 | 62/0.98 |
| | 1/2" | 7/8" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 119/0.99 | 118/0.99 | 116/0.98 | 115/0.98 | 114/0.98 | 113/0.98 |
| 3.5 Ton | 3/8" | 3/4" | 25/1 | 50/0.99 | 75/0.98 | 92/0.98 | 83/0.97 | 75/0.96 | 67/0.95 | 59/0.94 | 50/0.94 | 42/0.93 |
| | 1/2" | 3/4" | 25/1 | 50/0.99 | 75/0.98 | 100/0.98 | 117/0.97 | 115/0.96 | 113/0.95 | 112/0.94 | 110/0.94 | 109/0.93 |
| | 3/8" | 7/8" | 25/1 | 50/1 | 75/0.99 | 92/0.99 | 83/0.99 | 75/0.98 | 67/0.98 | 59/0.98 | 50/0.97 | 42/0.97 |
| | 1/2" | 7/8" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 117/0.99 | 115/0.98 | 113/0.98 | 112/0.98 | 110/0.97 | 109/0.97 |
| 4 Ton | 3/8" | 3/4" | 25/1 | 50/0.99 | 75/0.98 | 83/0.97 | 72/0.96 | 61/0.95 | 51/0.94 | 40/0.93 | 29/0.92 | 19/0.91 |
| | 1/2" | 3/4" | 25/1 | 50/0.99 | 75/0.98 | 100/0.97 | 114/0.96 | 112/0.95 | 110/0.94 | 108/0.93 | 106/0.92 | 105/0.91 |
| | 3/8" | 7/8" | 25/1 | 50/1 | 75/0.99 | 83/0.99 | 72/0.98 | 61/0.98 | 51/0.97 | 40/0.97 | 29/0.96 | 19/0.96 |
| | 1/2" | 7/8" | 25/1 | 50/1 | 75/0.99 | 100/0.99 | 114/0.98 | 112/0.98 | 110/0.97 | 108/0.97 | 106/0.96 | 105/0.96 |
| 5 Ton | 3/8" | 3/4" | 25/1 | 50/0.98 | 75/0.97 | 61/0.95 | 45/0.94 | 29/0.92 | 13/0.9 | 0/0.89 | 0/0.87 | 0/0.86 |
| | 1/2" | 3/4" | 25/1 | 50/0.98 | 75/0.97 | 100/0.95 | 109/0.94 | 106/0.92 | 102/0.9 | 99/0.89 | 96/0.87 | 94/0.86 |
| | 3/8" | 7/8" | 25/1 | 50/0.99 | 75/0.99 | 61/0.98 | 45/0.97 | 29/0.97 | 13/0.96 | 0/0.95 | 0/0.95 | 0/0.94 |
| | 1/2" | 7/8" | 25/1 | 50/0.99 | 75/0.99 | 100/0.98 | 109/0.97 | 106/0.97 | 102/0.96 | 99/0.95 | 96/0.95 | 94/0.94 |

**NOTES:**

1) Maximum Equivelent Line Length may not exceed 250'.
2) Maximum Actual Line Length may not exceed 200'.
3) Light Grey shaded areas are considered long line and may require accessories as recommended in Long Line Set Guide.
4) **DO NOT** use suction line traps in the suction riser as this adds additional unwanted pressure drop in the system.

# Refrigerant Line Size Information (Con't.)

| TWO-STAGE HEAT PUMPS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UNIT SIZE | ALLOWABLE LIQUID LINE SIZE | ALLOWABLE SUCTION LINE SIZE | OUTDOOR UNIT ABOVE OR BELOW INDOOR UNIT EQUIVALENT LENGTH (METERS) | | | | | | | | | |
| | | | 0-8 | 8-15 | 16-23 | 23-30 | 31-38 | 38-46 | 46-53 | 54-61 | 61-69 | 69-76 |
| | | | MAXIMUM VERTICAL SEPARATION / CAPACITY MULTIPLIER | | | | | | | | | |
| 1.5 Ton | 1/4" | 1/2" | 8/1 | 15/0.98 | 20/0.97 | 14/0.95 | 8/0.94 | 2/0.92 | 0/0.91 | 0/0.89 | 0/0.88 | 0/0.87 |
| | 5/16" | 1/2" | 8/1 | 15/0.98 | 23/0.97 | 30/0.95 | 30/0.94 | 29/0.92 | 27/0.91 | 26/0.89 | 24/0.88 | 23/0.87 |
| | 3/8" | 1/2" | 8/1 | 15/0.98 | 23/0.97 | 30/0.95 | 36/0.94 | 35/0.92 | 35/0.91 | 34/0.89 | 34/0.88 | 34/0.87 |
| | 1/4" | 5/8" | 8/1 | 15/1 | 20/0.99 | 14/0.99 | 8/0.98 | 2/0.98 | 0/0.97 | 0/0.97 | 0/0.97 | 0/0.96 |
| | 5/16" | 5/8" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 30/0.98 | 29/0.98 | 27/0.97 | 26/0.97 | 24/0.97 | 23/0.96 |
| | 3/8" | 5/8" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 36/0.98 | 35/0.98 | 35/0.97 | 34/0.97 | 34/0.97 | 34/0.96 |
| | 1/4" | 3/4" | 8/1 | 15/1 | 20/1 | 14/1 | 8/0.99 | 2/0.99 | 0/0.99 | 0/0.99 | 0/0.99 | 0/0.99 |
| | 5/16" | 3/4" | 8/1 | 15/1 | 23/1 | 30/1 | 30/0.99 | 29/0.99 | 27/0.99 | 26/0.99 | 24/0.99 | 23/0.99 |
| | 3/8" | 3/4" | 8/1 | 15/1 | 23/1 | 30/1 | 36/0.99 | 35/0.99 | 35/0.99 | 34/0.99 | 34/0.99 | 34/0.99 |
| 2 Ton | 1/4" | 5/8" | 8/1 | 15/0.99 | 10/0.98 | 1/0.98 | 0/0.97 | 0/0.96 | 0/0.95 | 0/0.95 | 0/0.94 | 0/0.94 |
| | 5/16" | 5/8" | 8/1 | 15/0.99 | 23/0.98 | 28/0.98 | 25/0.97 | 22/0.96 | 20/0.95 | 17/0.95 | 15/0.94 | 13/0.94 |
| | 3/8" | 5/8" | 8/1 | 15/0.99 | 23/0.98 | 30/0.98 | 34/0.97 | 33/0.96 | 32/0.95 | 31/0.95 | 30/0.94 | 29/0.94 |
| | 1/4" | 3/4" | 8/1 | 15/1 | 10/0.99 | 1/0.99 | 0/0.99 | 0/0.99 | 0/0.98 | 0/0.98 | 0/0.98 | 0/0.98 |
| | 5/16" | 3/4" | 8/1 | 15/1 | 23/0.99 | 28/0.99 | 25/0.99 | 22/0.99 | 20/0.98 | 17/0.98 | 15/0.98 | 13/0.98 |
| | 3/8" | 3/4" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 34/0.99 | 33/0.99 | 32/0.98 | 31/0.98 | 30/0.98 | 29/0.98 |
| 2.5 Ton | 1/4" | 5/8" | 8/1 | 13/0.99 | 0.3/0.98 | 0/0.97 | 0/0.95 | 0/0.94 | 0/0.93 | 0/0.92 | 0/0.91 | 0/0.9 |
| | 5/16" | 5/8" | 8/1 | 15/0.99 | 23/0.98 | 22/0.97 | 18/0.95 | 14/0.94 | 10/0.93 | 7/0.92 | 3/0.91 | 0.3/0.9 |
| | 3/8" | 5/8" | 8/1 | 15/0.99 | 23/0.98 | 30/0.97 | 31/0.95 | 30/0.94 | 28/0.93 | 27/0.92 | 26/0.91 | 24/0.9 |
| | 1/4" | 3/4" | 8/1 | 13/1 | 0.3/0.99 | 0/0.99 | 0/0.98 | 0/0.98 | 0/0.97 | 0/0.97 | 0/0.97 | 0/0.96 |
| | 5/16" | 3/4" | 8/1 | 15/1 | 23/0.99 | 22/0.99 | 18/0.98 | 14/0.98 | 10/0.97 | 7/0.97 | 3/0.97 | 0.3/0.96 |
| | 3/8" | 3/4" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 31/0.98 | 30/0.98 | 28/0.97 | 27/0.97 | 26/0.97 | 24/0.96 |
| 3 Ton | 5/16" | 5/8" | 8/1 | 15/0.98 | 22/0.97 | 16/0.95 | 11/0.93 | 5/0.92 | 0/0.9 | 0/0.89 | 0/0.87 | 0/0.87 |
| | 3/8" | 5/8" | 8/1 | 15/0.98 | 23/0.97 | 30/0.95 | 29/0.93 | 27/0.92 | 25/0.9 | 23/0.89 | 21/0.87 | 19/0.87 |
| | 5/16" | 3/4" | 8/1 | 15/0.98 | 22/0.99 | 16/0.98 | 11/0.98 | 5/0.97 | 0/0.96 | 0/0.96 | 0/0.95 | 0/0.95 |
| | 3/8" | 3/4" | 8/1 | 15/0.98 | 23/0.99 | 30/0.98 | 29/0.98 | 27/0.97 | 25/0.96 | 23/0.96 | 21/0.95 | 19/0.95 |
| | 1/2" | 3/4" | 8/1 | 15/0.98 | 23/0.99 | 30/0.98 | 36/0.98 | 36/0.97 | 35/0.96 | 35/0.96 | 35/0.95 | 34/0.95 |
| | 3/8" | 7/8" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 29/0.99 | 27/0.99 | 25/0.98 | 23/0.98 | 21/0.98 | 19/0.98 |
| | 1/2" | 7/8" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 36/0.99 | 36/0.99 | 35/0.98 | 35/0.98 | 35/0.98 | 34/0.98 |
| 3.5 Ton | 3/8" | 3/4" | 8/1 | 15/0.99 | 23/0.98 | 28/0.98 | 25/0.97 | 23/0.96 | 20/0.95 | 18/0.94 | 15/0.94 | 13/0.93 |
| | 1/2" | 3/4" | 8/1 | 15/0.99 | 23/0.98 | 30/0.98 | 36/0.97 | 35/0.96 | 34/0.95 | 34/0.94 | 34/0.94 | 33/0.93 |
| | 3/8" | 7/8" | 8/1 | 15/1 | 23/0.99 | 28/0.99 | 25/0.99 | 23/0.98 | 20/0.98 | 18/0.98 | 15/0.97 | 13/0.97 |
| | 1/2" | 7/8" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 36/0.99 | 35/0.98 | 34/0.98 | 34/0.98 | 34/0.97 | 33/0.97 |
| 4 Ton | 3/8" | 3/4" | 8/1 | 15/0.99 | 23/0.98 | 25/0.97 | 22/0.96 | 19/0.95 | 16/0.94 | 12/0.93 | 9/0.92 | 6/0.91 |
| | 1/2" | 3/4" | 8/1 | 15/0.99 | 23/0.98 | 30/0.97 | 35/0.96 | 34/0.95 | 34/0.94 | 33/0.93 | 32/0.92 | 32/0.91 |
| | 3/8" | 7/8" | 8/1 | 15/1 | 23/0.99 | 25/0.99 | 22/0.98 | 19/0.98 | 16/0.97 | 12/0.97 | 9/0.96 | 6/0.96 |
| | 1/2" | 7/8" | 8/1 | 15/1 | 23/0.99 | 30/0.99 | 35/0.98 | 34/0.98 | 34/0.97 | 33/0.97 | 32/0.96 | 32/0.96 |
| 5 Ton | 3/8" | 3/4" | 8/1 | 15/0.98 | 23/0.97 | 19/0.95 | 14/0.94 | 9/0.92 | 4/0.9 | 0/0.89 | 0/0.87 | 0/0.86 |
| | 1/2" | 3/4" | 8/1 | 15/0.98 | 23/0.97 | 30/0.95 | 33/0.94 | 32/0.92 | 31/0.9 | 30/0.89 | 29/0.87 | 29/0.86 |
| | 3/8" | 7/8" | 8/1 | 15/0.99 | 23/0.99 | 19/0.98 | 14/0.97 | 9/0.97 | 4/0.96 | 0/0.95 | 0/0.95 | 0/0.94 |
| | 1/2" | 7/8" | 8/1 | 15/0.99 | 23/0.99 | 30/0.98 | 33/0.97 | 32/0.97 | 31/0.96 | 30/0.95 | 29/0.95 | 29/0.94 |

**NOTES:**

1) Maximum Equivelent Line Length may not exceed 76 Meters.
2) Maximum Actual Line Length may not exceed 61 Meters.
3) Light Grey shaded areas are considered long line and may require accessories as recommended in Long Line Set Guide.
4) **DO NOT** use suction line traps in the suction riser as this adds additional unwanted pressure drop in the system.

# Performance Data @ AHRI Standard Conditions – Cooling

| DESIGNATED TESTED COMBINATION (DTC) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OUTDOOR UNIT | AIR HANDLER | TOTAL CAPACITY BTU/H [kW] | NET SENSIBLE BTU/H [kW] | NET LATENT BTU/H [kW] | SEER2 | EER2 | INDOOR CFM [L/S] | 47 DEGREE HEATING CAPACITY BTU/H [KW] | 47 DEGREE COP | 17 DEGREE HEATING CAPACITY BTU/H [KW] | 17 DEGREE COP | REGION IV HSPF2 |
| MLP14AY18AJ1 | MLH2CY2417STANN | 17,100 [5.0] | 13,100 [3.8] | 4,000 [1.2] | 14.3 | 9.0 | 625 [295.0] | 16,600 [5.0] | 3.30 | 10,100 [3.3] | 2.40 | 7.5 |
| MLP14AY24AJ2 | MLH2CY2417STANN | 22,800 [6.7] | 17,500 [5.1] | 5,300 [1.6] | 14.3 | 9.0 | 775 [365.8] | 22,800 [6.7] | 3.60 | 14,000 [4.3] | 2.50 | 7.5 |
| MLP14AY30AJ2 | MLH2CY3617STANN | 28,600 [8.4] | 21,900 [6.4] | 6,700 [2.0] | 14.3 | 9.0 | 950 [448.4] | 28,000 [8.4] | 3.40 | 16,000 [5.3] | 2.40 | 7.5 |
| MLP14AY36AJ2 | MLH2CY3617STANN | 34,200 [10.0] | 26,200 [7.7] | 8,000 [2.3] | 14.3 | 9.0 | 1,050 [495.5] | 33,600 [10.0] | 3.40 | 22,200 [6.9] | 2.50 | 7.5 |
| MLP14AY42AJ2 | MLH2CY4821STANN | 40,000 [11.7] | 30,700 [9.0] | 9,300 [2.7] | 14.3 | 9.0 | 1,300 [613.5] | 39,500 [11.6] | 3.60 | 24,800 [7.5] | 2.60 | 7.5 |
| MLP14AY48AJ2 | MLH2CY4821STANN | 45,500 [13.3] | 34,900 [10.2] | 10,600 [3.1] | 14.3 | 9.0 | 1,450 [684.3] | 44,000 [13.0] | 3.40 | 27,500 [8.1] | 2.50 | 7.5 |
| MLP14AY60AJ2 | MLH2CY6021STANA | 54,000 [15.8] | 41,400 [12.1] | 12,600 [3.7] | 14.3 | 9.0 | 1,650 [778.7] | 54,000 [16.3] | 3.50 | 32,000 [10.0] | 2.50 | 7.5 |
| MLP14AY36AC2 | MLH2CY3617STANN | 34,200 [10.0] | 26,200 [7.7] | 8,000 [2.3] | 14.3 | 9.0 | 1,050 [495.5] | 33,600 [10.0] | 3.40 | 22,200 [6.9] | 2.50 | 7.5 |
| MLP14AY42AC2 | MLH2CY4821STANN | 40,000 [11.7] | 30,700 [9.0] | 9,300 [2.7] | 14.3 | 9.0 | 1,300 [613.5] | 39,500 [11.6] | 3.60 | 24,800 [7.5] | 2.60 | 7.5 |
| MLP14AY48AC2 | MLH2CY4821STANN | 45,500 [13.3] | 34,900 [10.2] | 10,600 [3.1] | 14.3 | 9.0 | 1,450 [684.3] | 44,000 [13.0] | 3.40 | 27,500 [8.1] | 2.50 | 7.5 |
| MLP14AY60AC2 | MLH2CY6021STANA | 54,000 [15.8] | 41,400 [12.1] | 12,600 [3.7] | 14.3 | 9.0 | 1,650 [778.7] | 54,000 [16.3] | 3.50 | 32,000 [10.0] | 2.50 | 7.5 |
| MLP14AY36AD2 | MLH2CY3617STANN | 34,200 [10.0] | 26,200 [7.7] | 8,000 [2.3] | 14.3 | 9.0 | 1,050 [495.5] | 33,600 [10.0] | 3.40 | 22,200 [6.9] | 2.50 | 7.5 |
| MLP14AY42AD2 | MLH2CY4821STANN | 40,000 [11.7] | 30,700 [9.0] | 9,300 [2.7] | 14.3 | 9.0 | 1,300 [613.5] | 39,500 [11.6] | 3.60 | 24,800 [7.5] | 2.60 | 7.5 |
| MLP14AY48AD2 | MLH2CY4821STANN | 45,500 [13.3] | 34,900 [10.2] | 10,600 [3.1] | 14.3 | 9.0 | 1,450 [684.3] | 44,000 [13.0] | 3.40 | 27,500 [8.1] | 2.50 | 7.5 |
| MLP14AY60AD2 | MLH2CY6021STANA | 54,000 [15.8] | 41,400 [12.1] | 12,600 [3.7] | 14.3 | 9.0 | 1,650 [778.7] | 54,000 [16.3] | 3.50 | 32,000 [10.0] | 2.50 | 7.5 |

**NOTE:** This data includes DTC (Designated Test Combination) ratings and is for reference purposes only. A full listing of official ratings and system match-ups, along with downloadable certificates, will be accessible from the AHRI website: www.ahridirectory.org later this year.

**[ ] Designates Metric Conversions**

MAINLINE®
Reliably Comfortable.™

## GENERAL TERMS OF LIMITED WARRANTY*

*Mainline*® will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

***For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.**

Conditional Parts
(Registration Required).....Ten (10) Years

**Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.**

*"In keeping with its policy of continuous progress and product improvement, Mainline reserves the right to make changes without notice."*

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