

# MRCOOL® SIGNATURE SERIES TECHNICAL SPECIFICATION SHEET

10kW Electric Heat Kit • R-454B Next-Generation Refrigerant Platform

## Product Overview

The **MCAEHFD10X1AA** is a high-performance, factory-engineered supplemental electric resistance heat kit designed exclusively for integration with MRCOOL® Signature Series Multi-position Air Handlers. This system is fully optimized for environmental compliance, field-matched to work alongside architectural split systems employing low-GWP **R-454B** refrigerant. It provides vital auxiliary thermal capacity during severe sub-freezing ambient drops and offers dedicated emergency backup heating if the primary heat pump system cycle is interrupted.

## Key Mechanical & Operational Features

- **Multi-Position Versatility:** Specifically constructed and safety-certified for installation inside Multi-position Air Handlers across Upflow, Downflow, Horizontal Left, and Horizontal Right structural airflow arrangements.
- **Integrated Overcurrent Safety:** Comes standard with a factory-fitted 60A circuit breaker, executing dual functions as an internal electrical protection limit and a localized technician service disconnect.
- **Premium Heating Elements:** Utilizes open wire nickel-chromium alloy heating coils supported by ceramic insulators to deliver immediate thermal response and structural longevity.
- **Plug-and-Play Integration:** Outfitted with polarized heavy-duty quick-connect wiring harnesses to minimize field connection errors and decrease assembly timelines during configuration.
- **Defrost Cycle Air Tempering:** Automatically staging-capable via low-voltage controls to eliminate uncomfortable indoor drafts during outdoor heat pump coil defrost operations.

## Technical Parameters & Electrical Data

| Parameter Metric             | Official Engineering Specification Value                |
|------------------------------|---------------------------------------------------------|
| Product Model Code           | MCAEHFD10X1AA                                           |
| Product Line Series          | Signature Series                                        |
| Nominal Heating Capacity     | 10 Kilowatts (10 kW)                                    |
| Calculated Thermal Output    | Approximately 34,120 BTU/hr                             |
| Target Air Handler Frame     | Multi-position Form Factor (Upflow/Downflow/Horizontal) |
| Refrigerant Compatibility    | R-454B System Platforms Only                            |
| Rated Operational Voltage    | 208V / 230V - 240V AC                                   |
| Electrical Frequency / Phase | 60 Hz / Single Phase (1Ø)                               |
| Pure Heater Amperage Draw    | 41.67 Amps                                              |
| Circuit Breaker Rating       | 60A (Factory-Installed Component)                       |

## Mandatory Field Compliance Directive

**CRITICAL NOTICE:** This auxiliary heat kit is strictly classified as a Non-DIY (Do-It-Yourself) accessory. Installation involves high-voltage electrical connections, custom safety staging wiring, and direct integration with next-generation R-454B comfort hardware. To maintain the manufacturer's factory component protection plan and ensure operational safety, this unit **MUST** be field-installed exclusively by an EPA-certified, licensed HVAC professional and a certified electrician in complete compliance with the National Electrical Code (NEC) as well as all localized structural codes.