

# **Guide Specifications**

## **Enlight™ Rooftop Units**

Sept 8th, 2022



Note: This specification specifies Lennox Industries Enlight™ Rooftop Units. Revise specification section number and title below to suit project requirements, specification practices and section content. Refer to CSI MasterFormat for other section numbers and titles.

This specification utilizes the Construction Specifications Institute (CSI) Manual of Practice, including MasterFormat®, SectionFormat® and PageFormat®. Optional text and text requiring a decision is indicated by bolded brackets [ ]; delete text not required in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.



## **Packaged Outdoor HVAC Equipment**

**SECTION 23 74 00** 

#### **PART 1 - GENERAL**

#### 1.1 SECTION INCLUDES

A. Packaged rooftop units and commercial packaged, gas/electric, electric/electric, heat pump and dual fuel heat pump

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

#### 1.2 RELATED SECTIONS

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation, and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

## **1.3 REFERENCES**

- A. Agency Listings:
  - 1. Intertek ETL
  - 2. Canadian Standards Association (CSA).
- B. Safety Standards:
  - 1. Underwriters Laboratories (UL).
  - 2. Underwriters Laboratories of Canada (ULC).
  - 3. National Electric Code (NEC).
  - 4. Canadian Electric Code (CEC).
- C. Air-Conditioning, Heating and Refrigeration Institute (AHRI):
  - 1. AHRI 340/360 Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment.
  - 2. AHRI 370 Sound Rating of Large Outdoor Refrigerating and Air Conditioning Equipment.
  - 3. AHRI 210/240 Performance Rating of Unitary Air Conditioning and Air-Source Heat Pump Equipment.
- D. All models are ASHRAE 90. 1-2019 compliant
- E. ISO 9001, Manufacturing Quality Systems



- F. Some units are ENERGY STAR® certified
  - 1. 3, 4, and 5 ton Gas/Electric and Electric/Electric units
  - 2. 2, 3, 4, 5, 6.5, 13, 15 ton Heat Pump and Dual Fuel Heat Pump units
- A. All models meet California Code of Regulations, Title 24, IECC, and ASHRAE 90.1 section 6.4.3.10 requirements for staged airflow

Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties required to link components of a system together and to interface with other systems.

#### 1.4 PERFORMANCE REQUIREMENTS

Specifier Note: Article below should be restricted to Enlight™ (LGT) gas/electric packaged roof top units or Enlight™ (LCT) electric/electric packaged roof top units.

- A. [3, 4, 5, 6, 7.5, 8.5, 10, 12.5, 13, 15, 17.5, 20, and 25] ton capacity
- B. Electrical Characteristics
  - 1. 60 Hz

Specifier Note: 208/230-volt 1 phase is optional only for the 3, 4, and 5 ton high efficiency models. All 3 Phase voltages are available on 3-25 ton Enlight™ RTU's.

- 2. [208/230 v 1 Phase] [208/230 v 3 Phase] [460 v 3 Phase] [575 v 3 Phase] Specifier Note: Article below should be restricted to Enlight<sup>m</sup> (LHT) heat pump packaged roof top units, or Enlight<sup>m</sup> (LDT) heat pump dual fuel packaged roof top units.
  - A. [2, 3, 4, 5, 6.5, 7.5, 8.5, 10, 12.5, 13, 15, and 20] ton capacity
  - C. Electrical Characteristics
    - 1. 60 Hz

Specifier Note: 208/230-volt 1 phase is the only voltage and phase available for the 2 ton models. 208/230-volt 1 phase is optional only for the 3, 4, and 5 ton high efficiency models. All 3 Phase voltages are available on 3-20 ton Enlight RTU's.

2. [208/230 v - 1 Phase] [208/230 v - 3 Phase] [460 v - 3 Phase] Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

#### 1.5 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1
  Submittal Procedures
- B. Product Data: Submit product data for specified products
- C. Shop Drawings:
  - 1. Submit shop drawings in accordance with Section [01 33 00 Submittal Procedures]
  - 2. Indicate:
    - a. Equipment, piping, and connections, together with valves, strainers, control assemblies, thermostatic controls, auxiliaries and hardware and recommended ancillaries which are mounted, wired, and piped ready for final connection to building system, its size and recommended bypass connections
    - b. Piping, valves, and fittings shipped loose showing final location in assembly



- c. Control equipment shipped loose, showing final location in assembly
- d. Dimensions, internal and external construction details, recommended method of installation with proposed structural steel support, mounting curb details, sizes, and location of mounting bolt holes; include mass distribution drawings showing point loads
- e. Detailed composite wiring diagrams for control systems showing factory installed wiring and equipment on packaged equipment or required for controlling devices or ancillaries, accessories, and controllers
- f. Fan performance curves
- g. Details of vibration isolation
- h. Estimate of sound levels to be expected across individual octave bands in db
- i. Type of refrigerant used
- j. Plan view, front view end view, back view, and curb detail with dimensions

#### D. Quality Assurance:

- 1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties
- 2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements
- 3. Manufacturer's Instructions: Manufacturer's installation instructions

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

- E. Manufacturer's Field Reports: Manufacturer's field reports specified herein
- F. Closeout Submittals: Submit the following:
  - 1. Warranty: Warranty documents specified herein
  - Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance. Include names and addresses of spare part suppliers
  - 3. Provide brief description of unit, with details of function, operation, control, and component service
  - 4. Provide equipment inspection report and equipment operation test report
  - 5. Commissioning Report: Submit commissioning reports, report forms and schematics in accordance with Section [01 81 00 Commissioning]

#### **1.6 QUALITY ASSURANCE**

#### A. Qualifications:

- 1. Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project
- 2. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings).



## 1.7 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays
- C. Packing, Shipping, Handling and Delivery:
  - 1. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact
  - 2. Ship, handle, and unload units according to manufacturer's instructions
- D. Storage and Protection:
  - Store materials protected from exposure to harmful weather conditions
  - 2. Factory shipping covers to remain in place until installation

## 1.8 PROJECT CONDITIONS

A. Installation Location: [Confirm design conditions and temperature]

Specifier Note: Coordinate article below with Conditions of the Contract and Division 1 Closeout Submittals (Warranty).

#### 1.9 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.

C. Warranty Bond: Commencing on Date of Installation

Specifier Note: "Aluminized Heat Exchanger" and "Stainless steel Heat Exchanger" limited warranty is only available on Enlight (LGT) Gas/Electric and Enlight (LDT) Dual Fuel models. "Compressor" and "Other System Components" are covered on all Enlight units.

- 1. [Limited 10 years Aluminized Heat Exchanger]
- 2. [Limited 15 years optional Stainless Steel Heat Exchanger]
- 3. Limited 5 years on compressors
- 4. [Limited 3 years on Lennox Environ® Coil System]
- 5. Limited 3 years on Lennox® CORE Unit Controller
- 6. [Limited 5 years on High Performance Economizers]
- 7. Limited 1 year all other covered components



## **PART 2 - PRODUCTS**

Specifier Note: Retain article below for proprietary method specification. Add product attributes performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal, and regulatory) and assignment of responsibility for determining "or equal" products.

## 2.1 LENNOX ENLIGHT PACKAGED ROOFTOP UNITS

- A. Manufacturer: Lennox Industries
  - 1. Contact: 2140 Lake Park Blvd., Richardson, TX 75080; Telephone: (800) 453-6669; Website: www.lennoxcommercial.com
- B. General:

Specifier Note: Article below should be restricted to Enlight™ (LGT) gas/electric packaged roof top units or Enlight™ (LCT) electric/electric packaged roof top units.

- 1. Capacity
  - a. [3-6], [7.5-12.5], [13-25] tonnages

Specifier Note: Article below should be restricted to Enlight™ (LHT) heat pump packaged roof top units, or Enlight™ (LDT) heat pump dual fuel packaged roof top units.

- 2. Capacity
  - a. [2-5], [6.5-12.5], [13-20] tonnages
- C. Proprietary Products/Systems:
  - 1. Cabinet:
    - a. Interior panels
      - 1. 18 or 20 ga. thickness
      - 2. G-90 Galvanized steel
    - b. Exterior Panels
      - 1. Heavy gauge
      - 2. G60 pre-painted, galvanized steel
      - 3. Textured pre-paint with Polyurethane finish
      - 4. Corrosion resistant paint
        - a. Cyclic fog and UV exposure up to 1680 hours
        - b. Adhesion: ASTM D3359
        - c. Impact resistance: ASTM D2794
        - d. Humidity resistance: ASTM D2247
        - e. Abrasion resistance: ASTM 4060
        - f. Heat resistance: ASTM D3454
        - g. Flexibility: ASTM D4145 (NCCAII-19)
    - c. Full perimeter, heavy gauge galvanized steel base rail
    - d. Rigging holes on all four corners
    - e. Forklift slots (on three sides, not directly below condenser coil) on base rail
    - f. Raised or flanged edges around duct and power entry openings

Specifier Note: "Downflow" is the standard configuration that all Enlight™ units are shipped. Specifier Note: "Horizontal Flow" is an option for all Enlight™ models.



#### g. Airflow Choice:

- 1. 2 to 12.5 ton units are shipped in downflow, configuration can be field converted to horizontal airflow with optional Horizontal Discharge Kit
- 2. 13 to 25 ton units are available in downflow or horizontal return airflow configuration
  - a. Horizontal airflow requires Horizontal Roof Curb
  - b. Horizontal Return Air Panel Kit is also required if converting a downflow configuration into horizontal

Specifier Note: Add the [and gas lines] only if using an Enlight (LGT) gas/electric or Enlight (LDT) dual fuel models

- h. Electrical lines [and gas lines] can be brought through the base of the unit or through horizontal knockouts
- i. Insulation:
  - 1. All panels adjacent to conditioned air are fully insulated with non-hygroscopic fiberglass insulation
  - 2. Unit base is fully insulated
  - 3. Unit base insulation also serves as air seal to the roof curb
- j. Access Panels: Hinged for compressor/controls/heating areas, blower access and air filter/economizer access; and, sealed with quarter-turn latching handles and tight air and water seal
- k. Exterior panels constructed of heavy-gauge galvanized steel with textured pre-paint with Polyurethane finish
- I. Condensate Drain Pan:
  - 1. Anti-microbial, corrosion-resistant, double-sloped, composite condensate Drain Pan
  - 2. Side or bottom drain connections
  - 3. Reversible to all connection to back of unit

Specifier Note: "Factory Installed Options" are options that can be selected for the Enlight rooftop units. The "Factory Installed Options" are installed at the Lennox manufacturing facility.

Specifier Note: "Field Installed Accessories" are options that can be selected for the Enlight roof top units. The "Field Installed Accessories" are shipped separately and installed in the field.

- Cooling System:
  - a. Refrigerant type: R-410A
  - b. Capable of operating from 0 to 125° F (-18 to 52° C) without installation of additional controls
  - c. Compressors:
    - Scroll type
    - 2. Resiliently mounted on rubber mounts for vibration isolation
    - 3. Overload protected
    - 4. Internal excessive current and temperature protection



- 5. Isolated from condenser and evaporator fan air streams
- 6. Refrigerant cooled
- d. Thermal expansion valve
- e. Crankcase heaters
- f. High-capacity filter/driers
- g. High pressure switches
- h. Low pressure switches
- i. Indoor coil freeze protection
- j. [Hot-Gas Reheat Coil (Humiditrol®)][Factory MSAV units only][Gas/Electric and Electric/Electric units only]

Specifier Note: Include following 2 articles for Enlight™ (LHT, LDT) packaged heat pumps models.

- k. Reversing Valves: Four-way interchange reversing valve
- I. Defrost Control
- 3. Coil Construction:
  - a. Tube and fin condensing/evaporator coil general construction:
    - 1. Aluminum rippled and lanced fins
    - 2. Copper tube construction
    - 3. Flared shoulder tubing connections
    - 4. Aluminum fins mechanically bonded to copper tubes
    - 5. All coils are high pressure leak tested at manufacturing facility
  - b. Environ<sup>™</sup> condensing/evaporator coil general construction:
    - 1. Aluminum/Aluminum construction
    - 2. Aluminum lanced fins
    - 3. Aluminum fins thermally bonded to aluminum flat tube
    - 4. All coils are high pressure leak tested at manufacturing facility
  - c. Evaporator Coils:
    - 1. With balanced port thermal expansion valves, freeze protection on each compressor circuit, pressure and leak tested to 500 psi
    - 2. [2-6 Tons] Each compressor circuit on coil divided across face of coil and active through full depth of coil.
    - 3. [6.5-25 Tons] Each compressor circuit on coil divided by rows that are active across the entire surface area of the supply air.
    - 4. [With flexible immersed coating electrodeposited by dry film process, meets standards: Military Specification MIL-P-53084, ASTM B117 and ASTM 1153]
  - d. Condenser Coils:
    - 1. [E-Coat- flexible immersed coating electrodeposited by dry film process, meets standards: Military Specification MIL-P-53084, ASTM B117 and ASTM 1153]



#### 4. Wiring:

- a. Keyed and labeled field connections, color coded, and continuously marked wire to identify point-to-point component connections
- b. Not in contact with hot-gas refrigerant lines or sharp metal edges

Specifier Note: Enlight units with Gas Heating Systems are LGT and LDT models.

- 5. Gas Heating System:
  - a. Induced draft
  - b. Natural gas fired system with direct spark ignition
  - c. Electronic flame sensors
  - d. Flame rollout switches
  - e. High heat limit switches
  - f. Induced draft failure switch and capable of operating to altitude of 2000 feet (610m) with no derate to manifold pressure
  - g. Service access for controls, burners, and heat exchanger
  - h. Heat Exchanger:
    - 1. Tubular Design
  - i. [Aluminized steel] [Stainless steel]
  - j. Gas piping system tight and free of leaks when pressurized to maximum supply pressure
  - k. Gas Valve: redundant type gas heat valve with manual shutoff
  - I. [Single-stage gas heating] [Two-stage gas heating, available on 3 to 25 ton models only] [Four-stage gas heating available on 13-25 ton models only]
  - m. Gas Burners: Aluminized steel inshot-type gas burners
  - n. Direct spark pilot ignition
  - o. Fan and Limit Control
  - p. Safety Switches
  - q. Gas piping system tight and free of leaks
  - r. [Low NOx 3-6 ton]
  - s. [Ultra-Low NOx 3-5 ton, available in standard and medium heat sizes and ECM forward-curved blowers only][Gas/Electric units only]

Specifier Note: "Field Installed Accessories" are options that can be selected for the Enlight (LGT) Gas/Electric and Enlight (LDT) Dual Fuel models. The "Field Installed Accessories" are shipped separately and installed in the field.

- a. Field Installed Accessories:
  - 1. [Combustion Air Intake Extensions]
  - 2. [Vertical Vent Extension Kit]
  - 3. [LPG/Propane Kit]
  - 4. [Low Temperature Vestibule Heater]



Specifier Note: The "Electric Heating System" is an option for Enlight (LCT) electric/electric and Enlight (LHT) heat pump models only. The "Electric Heating System" is only available for factory or field installation.

- 2. Electric Heating System:
  - a. Electrical resistance heater
  - b. Reset thermal limit protection
  - c. Single-point power supply
  - d. Heater Element:
    - 1. Nickel chromium wire
    - 2. Individually fused
  - e. Electric heater slides out of unit for service
- 3. Heating Controls:
  - a. Support up to 2 stages of heating control from thermostat or DDC
  - Support up to 4 stages of heating control on 13-25 ton models with room sensor or discharge air control
  - c. Delay time of 30 seconds between low and high heat stages
- 4. Supply Air Fan Motor and Drives:

Specifier Note: Direct drive ECM motors available on 2-12.5 tons only.

- a. [Direct Drive ECM] [Belt drive]
- b. Permanently lubricated ball bearings (for belt drive motors)
- c. Thermal overload protected motors with automatic reset
- d. Adjustable sheaves on belt drive motors for blower speed adjustment
- e. Optional low and high static motor/drive combinations and optional drive kits
- f. [Multi-Stage Air Volume (MSAV): Factory w/ Direct Drive ECM on 2-12.5 ton]
- g. [Multi-Stage Air Volume (MSAV): Factory w/ VFD on 13-25 ton]
- h. [Multi-Zone Variable Air Volume (VAV): Factory w/ Direct Drive ECM on 7.5-12.5 ton][Gas/Electric and Electric/Electric units only]
- i. [Multi-Zone Variable Air Volume (VAV): Factory w/VFD on 13-25 ton][Gas/Electric and Electric/Electric units only]
- 5. Supply Air Fan:

Specifier Note: 3, 4, and 5 ton models with the high static blower option and 6-12.5 ton models have backward curved blades. All others have forward curved blades.

- a. [Double inlet type, galvanized steel with forward curved blades] [Double inlet type, galvanized steel with aerodynamically optimized impeller with backward curved blades]
- b. Statically and dynamically balanced
- c. Continuous or automatic control for occupied periods
- 6. Supply Air Filters:
  - a. Disposable 2 inch
  - b. [2" MERV 16 Filters: [Field]]



- c. [2" MERV 13 Filters: [Field] [Factory]]
- d. [2" MERV 8 Filters: [Field] [Factory]]
- e. [2" MERV 4 Filters: [Field] [Factory]]
- 7. Condenser Fan Motor:
  - a. Direct drive with permanently lubricated ball bearings.
  - b. Watertight with thermal overload protection and automatic reset
  - c. Motor mount isolated from fan safety guard
- 8. Condenser Fans:
  - a. Corrosion resistant propeller type
- 9. Unit Controller:
  - a. Solid state control board to operate unit
  - b. Rotating digital display
  - c. Mobile app navigation & programming
  - d. Guided menu setup
  - e. Shall provide a 5°F temperature difference between cooling and heating set points to meet ASHRAE 90.1 Energy Standard
  - f. Shall provide and display alarms, alarm history and system status
  - g. Component and cooling/heating mode run test capability
  - h. Shall accept input from a CO2 sensor
  - i. Economizer control
  - j. BACnet MS/TP Connectivity
  - k. BACnet IP Connectivity
  - I. Blower on/off delay
  - m. 4-stage heat/4-stage and variable-speed cool compatible
  - n. Warm-up mode
  - o. DDC compatible
  - p. Indoor air quality input
  - q. Mechanical cooling from 0-125°F
  - r. Component runtime and cycle count data collection
  - s. Blower proving switch strike 3

Specifier Note: Phase/voltage protection standard on 7.5-25 ton models.

- t. [Phase/voltage monitoring/protection: Factory][2-6 tons]
- u. Real time clock (timestamps)
- v. USB interface with profiles and firmware upgrade capability
- w. Economizer Fault Detection and Diagnostics
  - 1. CO<sub>2</sub> sensor error
  - 2. Outside Air Temperature sensor error



- 3. Discharge Air sensor error
- 4. Actuator over voltage
- 5. Actuator under voltage
- x. Controls Options:
  - 1. [CO<sub>2</sub> Sensor: Field Mounted]
  - 2. [Dirty Filter Switch: [Field] [Factory]]
  - 3. [Blower Proving Switch: [Field] [Factory]]
  - 4. [Phase/Voltage Monitoring Protection: Factory]
  - 5. [LonTalk: [Field] [Factory]]
  - 6. [Novar LSE: Factory]
  - 7. [CPC Direct Interface: Factory]
  - 8. [Fresh Air Tempering Sensor: [Field] [Factory]]
  - 9. [Smoke detector supply: [Field] [Factory]]
  - 10. [Smoke detector return: [Field] [Factory]]

#### 14. Accessories:

- a. [High Performance Economizer downflow] [High Performance Economizer horizontal]: Hoods provided [Field] [Factory]
  - i. Outside (fresh) Air damper Max Leakage Rate: 4 CFM/sq. ft. at 1" w.g.
  - ii. Return Air Max Leakage Rate: 4 CFM/sq. ft. at 1" w.g.
  - iii. Damper Reliability: 60,000 cycles minimum
  - iv. Economizer fault detection and diagnostics
  - v. CO<sub>2</sub> sensor error
  - vi. Outside Air Temperature sensor error
  - vii. Discharge Air sensor error
  - viii. Actuator over voltage
  - ix. Actuator under voltage

Specifier Note: Single and Differential Dual Enthalpy are **NOT** Approved for California Title 24

- b. [Economizer control: Differential Sensible: [Field] [Factory]]
- c. [Economizer control: Single Enthalpy: [Field] [Factory]]
- d. [Economizer control: Differential Dual Enthalpy: [Field] [Factory]]
- e. [Economizer control: Single Sensible: [Field] [Factory]]
- f. [Economizer control: Global (Field provided sensor): [Factory]]
- g. [Motorized Outdoor Air Damper: [Field] [Factory]]
- h. [Manual Outdoor Air Damper: Hood provided [Field]]

Specifier Note: Barometric relief damper is included with field installed economizer.

- i. [Power exhaust fan: [Field] [Factory]]
- j. [Roof curb: [Field]]
- k. [[Barometric relief damper downflow] [Barometric relief damper horizontal]: hoods provided [Field]]



I. [Energy Recovery System: [Field]]

m. [Ceiling Diffuser: Field] [Flush] [Step down]

n. [Transition: Field] [Supply] [Return]

o. [UVC lamps: [Field]]

p. [Needle Point Bipolar Ionization: [Field]]

q. [Combination Coil/Hail Guards: [Field] [Factory]]

r. [Disconnect Switch: [Field] [Factory]]

s. [[Condensate Drain Trap PVC] [Condensate Drain Trap Copper]: [Field] [Factory]]

t. [High SCCR (100kA) Rating: [Factory]]

u. [GFCI Service Outlets (field wired) [Field] [Factory]] [GFCI Service Outlets (unit powered) Factory]]

v. [HACR Circuit breaker: [Factory]]

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

#### 2.2 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted

## **PART 3 – EXECUTION**

#### 3.1 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Article below is an addition to the CSI *SectionFormat*. Revise article below to suit project requirements and specifier's practice.

A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions and manufacturer's SPEC-DATA® sheets.

#### 3.2 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

## 3.3 INSTALLATION

A. Install [Packaged rooftop units] [and] [Commercial packaged, gas/electric, electric/electric, electric/heat pump, gas/heat pump] rooftop units in accordance with manufacturer's instructions [on roof curbs provided by manufacturer] [as indicated].

## **END OF SECTION**

Bulletin No. X000412 (December 2022)