



SECTION 23 34 00 HVAC Fans

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. The ceiling-mounted circulation fan is the model scheduled with the capacities indicated. The fan shall be furnished with mounting hardware and a remote control as manufactured by Haiku® Home.
- B. Summary of Work
 - 1. Installation of the fan, miscellaneous or structural metal work (if required), field electrical wiring, cable, conduit, fuses and disconnect switches, other than those addressed in the installation scope of work, shall be provided by others. Installation services are available through Haiku Home. Consult the appropriate installation scope of work for information on the available installation options, overview of customer and installer responsibilities, and details on installation site requirements.

1.2 RELATED SECTIONS

- A. 21 00 00 Fire Suppression
- B. 23 00 00 Heating, Ventilating, and Air Conditioning (HVAC)
- C. 26 00 00 Electrical

1.3 REFERENCES

- A. Canadian Standards Association (CSA)
- B. International Organization for Standardization (ISO)
- C. National Electric Code (NEC)
- D. National Fire Protection Association (NFPA)
- E. Norma Oficial Mexicana (NOM)
- F. Underwriters Laboratory (UL)

1.4 SUBMITTALS

- A. Shop Drawings: Drawings detailing product dimensions, weight, and attachment methods
- B. Part 2 Product Data: Specification sheets on the ceiling-mounted fan, specifying electrical and installation requirements, features and benefits, and controller information
- C. Revit Files: Files provided for architectural design
- D. Part 2 Product Documentation: The manufacturer shall furnish a copy of all installation, operation, and maintenance instructions for the fan.
- E. Schedule

1.5 QUALITY ASSURANCE

- A. Certifications
 - 1. Safety
 - a. The fan assembly, as a system, shall be Intertek/ETL-certified and built pursuant to the following standards.
 - 1) Canada
 - a) CSA C22.2 No. 113. Standard for Safety for Fans and Ventilators.
 - 2) United States
 - a) UL 507. Standard for Safety for Electric Fans.
 - b. The fan motor shall be Intertek/ETL-certified and built pursuant to the following standards.
 - 1) Canada
 - a) CSA C22.2 No. 100. Standard for Safety for Motors and Generators.
 - b) CSA C22.2 No. 77. Standard for Safety for Motors with Inherent Overheating Protection.



- 2) United States
 - a) UL 1004-1. Standard for Safety for Rotating Electrical Machines - Part 1 General Requirements.
 - b) UL 1004-3. Standard for Safety for Thermally Protected Motors.
 - c) UL 1004-7. Standard for Safety for Electronically Protected Motors.
- B. Manufacturer Qualifications
 1. The fan and any accessories shall be supplied by Haiku Home that has a minimum of ten (10) years of product experience.
 2. ISO 9001-certified

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver product in original, undamaged packaging with identification labels intact. The fan shall be new, free from defects, and factory tested.
- B. The fan and its components must be stored in a safe, dry location until installation.

1.7 WARRANTY

- A. The manufacturer shall replace any products or components defective in material or workmanship, free of charge to the customer (including transportation charges within the USA, F.O.B. Lexington, KY), pursuant to the complete terms and conditions of the Haiku Home Non-Prorated Warranty in accordance to the following schedule:

Item	Period of Coverage
Motor	3 years
All other components	1 year

Labor to repair the defect will be provided free of charge at the Haiku Home service center for defects arising during the Warranty Period.

PART 2 PRODUCT

2.1 MANUFACTURER

- A. Haiku Home, PO Box 11307, Lexington, Kentucky 40575.
Phone (877) 244-3267. Fax (859) 233-0139. Website: www.haikuhome.com.

2.2 HAIKU® OUTDOOR FANS

- A. Complete Unit
 1. Regulatory Requirements: The fan assembly, as a system, shall be Intertek/ETL-certified and built pursuant to relevant safety standards as described above. The fan shall be suitable for use in wet locations when installed in a GFCI protected branch circuit.
 2. Quality: The fan shall display good workmanship in all aspects of its construction. Field balancing of the airfoils shall not be necessary.
 3. Colors and Materials: Airfoil materials and colors may be selected by the architect or owner as described in 2.2.C, "Airfoils."
 4. Optional Accessories
 - a. An LED light may be selected at time of order.
- B. Mounting System
 1. Low Profile Mount
 - a. The low profile mount shall be suitable for flat ceilings as low as 8 ft (2.4 m) tall.
 - b. The fan shall be equipped with a mounting plate, rubber bumpers, mounting brackets, a compact, low-profile motor hub assembly, and mounting hardware.
 - c. The fan shall be available with a diameter of 52" (1.3 m) or 60" (1.5 m).
 2. Standard Mount



- a. The standard mount shall be suitable for flat ceilings with heights ranging from 8.5–12 ft (2.6–3.7 m).
 - b. The fan shall be equipped with a rubber bushing, mounting bracket, wiring cover, wiring cover trim, standard motor hub assembly, and mounting hardware.
 - c. The fan shall be available with a diameter of 52" (1.3 m) or 60" (1.5 m).
3. Universal Mount
- a. The universal mount shall be suitable for flat or sloped ceilings with heights ranging from 8.5–18 ft (2.6–5.5 m).
 - b. The fan shall be equipped with a mounting bracket, canopy, mounting ball and wedge, extension tubes, wiring cover, motor hub, and mounting hardware.
 - c. A 7" (178-mm), 20" (508-mm), and 32" (813-mm) extension tube shall be included with 52" (1.3-m) and 60" (1.5-m) fans. A 20" (508-mm) and 32" (813-mm) extension tube shall be included with 84" (2.1-m) fans.
 - d. The fan shall be available with a diameter of 52" (1.3 m), 60" (1.5 m), or 84" (2.1 m).
- C. Airfoils
- a. The fan shall be equipped with three airfoils spanning a total diameter of 52" (1.3 m), 60" (1.5 m), or 84" (2.1 m), as specified by the architect or owner.
 - b. Airfoils shall be made of aluminum.
 - c. Airfoils shall be available in a caramel wood grain, cocoa wood grain, oil-rubbed bronze, satin nickel, brushed aluminum, white, or black finish, as specified by the architect or owner.
- D. Motor
1. The fan shall have an electronically commutated motor (ECM) rated for 100–240 VAC, single-phase.
 2. For 52" (1.3-m) and 60" (1.5-m) fans, the motor shall draw 1.2–30 watts depending on the speed at which the fan is operated.
 3. For 84" (2.1-m) fans, the motor shall draw 3.7–60 watts depending on the speed at which the fan is operated.
 4. The fan shall be designed for continuous operation in ambient temperatures of 32–104°F (0–40°C), and a humidity range of 20–90% (non-condensing).
- E. Safety Cable
1. The fan shall be equipped with a safety cable that provides an additional means of securing the fan assembly to the building structure. The safety cable shall be 1.5 mm in diameter and fabricated of aircraft steel.
 2. Field construction of safety cables is not permitted.
- F. Remote Control
1. The fan shall be equipped with a compact IR remote control that allows intuitive operation of the fan in the following modes:
 - a. Speeds 0 (Off) through 7 (High).
 - b. Sleep Mode: Sleep Mode shall reduce the fan speed by one increment every hour until the lowest speed is reached. When the programmed time period ends, the fan automatically turns off. Sleep Mode is only active when Timer Mode is used.
 - c. Timer Mode: In Timer Mode, the fan runs at a set speed until the programmed time period ends.
 - d. Whoosh® Mode: Silently varies fan speed to mimic cooling natural breezes.
 2. Each operating mode shall be indicated by a pattern on the fan mode indicators, which shall be located on the bottom of the fan and shall be visible from the floor. All indicators shall automatically turn off approximately five seconds after the last control button is pressed.
 3. The remote shall be 1.2" wide x 3.4" tall x 0.2" thick (30 mm wide x 86 mm tall x 5 mm thick), and shall operate on a CR 2025 3 V lithium battery (included).



PART 3 EXECUTION

3.1 PREPARATION

- A. The fan location must have an appropriate ceiling-mounted outlet box marked, “Acceptable for Fan Support.” If there is not an appropriate outlet box already installed at the location, one must be installed on a ceiling joist or beam and be properly wired. Additional mounting options may be available. Consult the installation guide for additional details.
- B. The fan location must be free from obstacles such as lights, cables, or other building components.
- C. Check the fan location for proper electrical requirements. Consult the installation guide for appropriate circuit requirements.

3.2 INSTALLATION

- A. Install the fan according to the manufacturer’s installation guide, which includes acceptable mounting methods.
- B. Required Distances
 - 1. For 52” (1.3-m) and 60” (1.5-m) fans, the airfoils must be at least 7 ft (2.1 m) above the floor.
 - 2. For 84” (2.1-m) fans, the airfoils must be at least 8 ft (2.4 m) above the floor.
 - 3. The airfoils must have at least 2 ft (0.6 m) clearance from all obstructions.

END OF SECTION