
THIS SECTION IS BASED ON ROCKFON'S "PLANAR® MACRO AND PLANAR MACRO PLUS®" LINEAR CEILINGS.

Though Rockfon Planar Macro/ Planar Macro Plus are meant for interior and exterior applications, Specifications as shown here pertain to interior applications only.

Contact Rockfon for guidelines specifically applicable to exterior use and seismic installations for categories C, D, E, and F for Rockfon Planar Macro / Planar Macro Plus products.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes: Provide suspended ceiling acoustical ceiling panels including but not limited to:
 - 1. Linear Metal Ceiling System.
- B. Related Sections:
 - 1. Section 09 52 23, Metal Acoustical Ceiling Suspension Assemblies.
 - 2. Section 09 54 00, Specialty Ceilings.
 - 3. Section 09 58 00, Integrated Ceiling Assemblies.
 - 4. Section 01 81 13, Sustainable Design Requirements
 - 5. Section 01 81 19, Indoor Air Quality Requirements
 - 6. Section 13 48 00, Sound, Vibration, and Seismic Control.
 - 7. Section 23 50 00, Central Heating Equipment.
 - 8. Section 26 50 00, Lighting.

1.3 REFERENCES

- A. Abbreviations and Acronyms:
 - 1. ASTM: American Society for Testing and Materials
 - 2. CISCA: Ceilings & Interior Systems Construction Association; www.cisca.org.
 - 3. IBC: International Building Code
 - 4. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures
 - 5. ICCES: International Code Council-Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components
 - 6. ICCES: International Code Council-Evaluation Services Report - ESR 2631 Rockfon Chicago Metallic Corporation Suspended Ceiling Framing Systems and Suspension Ceiling Systems
 - 7. California Department of Public Health CDPH/EHLB Emission Standard Method Version 1.1 2010

8. LEED - Leadership in Energy and Environmental Design is a set of rating systems for the design, construction, operation, and maintenance of green buildings
9. International Well Building Standard
10. Mindful Materials
11. Living Building Challenge

B. Reference Standards:

1. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
2. ASTM A641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
3. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the hot-dipped process
4. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
5. ASTM C635/C635M Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
6. ASTM C636/C636M Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels
7. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
8. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
9. ASTM E580 Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint
10. ASTM E1111/E1111M Standard Test Method for Measuring the Interzone Attenuation of Open Office Components
11. ASTM E1414/E1414M Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum
12. ASTM E1264 Classification for Acoustical Ceiling Products

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Meetings: Conduct meeting at Project site. Agenda includes Project conditions, coordination with work of other trades and layout of items which penetrate ceilings.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's Product data, including suspension system and maintenance data.
- B. Samples: Submit samples of specified ceiling panels.
- C. Show Drawings: Necessary technical drawings and documents that pertain to the layout of the acoustical metal ceiling.
- D. Certifications: Acoustical metal ceiling product's certifications that confirm compliance with applicable tests and standards. Acoustical metal ceiling products must also contain information pertaining to certification for NRC.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Supply additional material (full-size ceiling panels) equal to 5% of ceiling area. Additional material should match Products installed and have the appropriate labels and identification.
- B. Supply extra materials that match Products installed and are packaged with protective covering for storage and identified with labels describing contents.

1.7 QUALITY ASSURANCE

- A. Coordination of Work: Coordination between installers and other related professions in reference to acoustical ceiling work can include electrical fixtures and systems, fire safety systems, gypsum and building construction.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect system components from excessive moisture in shipment, storage, and handling. Deliver in unopened bundles and store in a dry place with adequate air circulation.

1.9 LEED

- A. Rockfon Metal Ceilings qualify for the following credits:
 - 1. Category - Material & Resources
 - a. MR Credit 2.1, 2.2 - Construction Waste Management Divert 50% or 75% from disposal
 - b. MR Credit 4.1, 4.2 - Recycled Content
 - c. MR Credit 5.1, 5.2 - Regional Materials (dependent on location)
 - 1) LEED NC - 10% Extracted, Processed & Manufactured Regionally LEED CI - 20% Manufactured Regionally
 - 2. Category - Indoor Environmental Quality
 - a. EQ Credit 4.1 to 4.6 - Low-Emitting Materials
 - 3. Category - Innovation and Design Process
 - a. ID Credit - Acoustic Performance

1.10 WARRANTY

- A. Manufacturer Warranty: Submit a written warranty executed by manufacturer for a period of 1 year from date for metal ceilings, of Substantial Completion, agreeing to repair or replace suspension system components that fail or are compromised within the specified warranty period. Failed or compromised parts can include, but are not limited to:
 - 1. Rusting or defects directly made by the manufacturer.
 - 2. Sagging or warping directly made by the manufacturer.

PART 2 - PRODUCTS**2.1 MANUFACTURERS**

- A. Metal Ceiling Systems:
Rockfon, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164 www.rockfon.com.
- B. Suspension Systems:

1. Rockfon, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.

- C. Aluminum Perimeter Trim:
Rockfon, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.

2.2 MATERIALS

- A. Acoustical Metal Panels: Linear Metal Ceiling System, "PLANAR MACRO® PLANAR MACRO PLUS®" LINEAR CEILINGS" by Rockfon with following characteristics:

1. Surface: Smooth
2. Composition: Metal
3. Material: [0.032"] Aluminum
4. Edges: [SQ]
5. Profile Size: [2"] [4"] [6"] [8"]
6. Color:
7. Perforation Option:
8. Filler: [Integral] [Recessed]
9. NRC:
10. Fire Class: Class A.
11. Light Reflectance:
12. Recycled Content: up to 85%

- B. Accessories:

1. Planar Filler Strips (Recessed): Manufactured from aluminum 3/4 inch wide by 144 inches long coated to (match panel) (___ color) with linear metal panels.
2. Panel Splices: Manufactured from 0.025" thick aluminum, 8-3/4 inches long coated with (black baked-on polyester enamel) (finish identical to linear metal panels), with profile width compatible with linear panels.
3. End Plugs: Manufactured from 0.025" thick aluminum with square edges. Coated identical to linear metal panels.
4. Access Doors: Built from hardware kit with Symmetrical Carriers. Panels identical to linear metal panels.
5. Perimeter Trim
 - a. Rockfon Infinity: extruded aluminum perimeter trim
 - b. Planar Wall Channel: Manufactured from 0.025" thick aluminum 2" inch I.D. by 1-7/8" top flange by 1" bottom flange by 120 inches long. Coated identical to linear metal panels.
 - c. Wall Angle: Manufactured from 0.025" thick aluminum 15/16 inch wide by 3/4 inch high by 144 inches long with hemmed edges.

- C. Suspension System

1. Symmetrical Carrier:
 - a. Manufactured to an inverted "U" shape from 0.040" aluminum, 144 inches long. Coated with black polyester enamel. **Architect Note:** Double grip carrier required on all exterior applications.
 - b. Slotted at appropriate intervals to receive stabilizing components as described below.
2. Stabilizer Bars: Manufactured from 0.025" thick aluminum (49-13/16) (35-13/16) (23-13/16) inch long. Coated with black polyester enamel.
3. Radius Carrier: Manufactured to an inverted "U" shape from 0.040" thick aluminum 144" inches long with integral carrier tabs, painted black.

-
4. T-Bar Carrier: Manufactured from .015 galvanized steel, 1 ½" in height, with 15/16" face. with carrier tabs extending downward to accept panel installation, painted black
 5. Cross Tees: Manufactured from galvanized steel, 1 ½" in height, 15/16" face, black
- D. Acoustical Material
1. Acoutex acoustical non-woven fiber factory adhered to back of perforated panels with 0.70 NRC.
 2. Blanket type black vinyl faced one side (1) (1-1/2) inches thick by (1) (1-1/2) pounds per cubic foot density with [0.80] [0.90] NRC
- E. Air Diffusion
1. Air Units: a. (2) (4) (6) (8) slot with (8) (10) (12) (14) inches wide (dampered) (undampered) top mounted collars.
 - a. Manufactured by others from 0.024" inch thick steel with gasketed lower flanges and factory applied acoustical insulation adhered to internal surfaces.
 - b. "L" shaped directional vanes painted black.
 - c. Optional remote control damper assembly with control cable extending through air distribution slot.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine suspension assemblies, with installer present, for compliance with requirements specified in this and other Sections affecting ceiling panel installation and with requirements for installation tolerances and other conditions affecting performance of acoustic ceiling assemblies.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install ceiling panels to comply with ASTM C636/C636M, ASTM E580, and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
- B. General:
 1. For interior applications in non-seismic areas install in accordance with ASTM C636 (see 1.03, A 2.).
 2. For interior applications in seismic areas install in accordance with (UBG 25-2 Standard) (IBC Section 1621) (ASTM E 580) (Code Compliance Research Report (CCR) – 0267).
 3. For exterior soffit applications install in accordance with ASTM C636 (see 1.03, A 2.), and Rockfon Exterior Installation guidelines
- C. Suspension System
 1. Symmetrical Carriers: Installed 50 inches on center by direct suspension from existing structure with not less than 12 ga. hanger wires wrapped tightly 3 full turns, spaced 48 inches on center.
 2. Stabilizer Bars: Installed perpendicular to symmetrical carrier (24) (36) (48) inches on center.
 3. T-Bar Carriers: Installed 48 inches on center by direct suspension from existing structure with not less than 12 ga. hanger wires wrapped tightly 3 full turns, spaced 48 inches on center

4. Cross tees: Installed perpendicular to T-Bar Carrier (24) (48) inches on center

D. Linear Metal Panels:

- 1 Attach to main carrier tabs and connect with Panel Splices with joints staggered in adjacent rows.
- 2 End Plugs: Installed exposed ends of panels.
- 3 Wall Angles / Wall Channel: Installed on vertical surfaces intersecting system by appropriate method in accordance with industry accepted practice.
- 4 Filler Strips: Installed into open reveal between panels prior to the installation of panels
- 5 Access Panels: Installed in accordance with manufacturers recommendations.

E. Integrated Accessories

1. Insulation trimmed to fit and installed in plenum between carriers.

3.3 REPAIR

- A. Remove damaged or compromised components; replace with undamaged components.

3.4 CLEANING

- A. Clean exposed surfaces in accordance with manufacturer's written instructions.

END OF SECTION