

# ICC Deck-Suspended Ceiling Hanger

## Specification

### Part 1 – General

#### 1.01 Work Included

- A. Furnish all labor, materials, tools and equipment, and perform all operations necessary for the installation of resiliently suspended ceilings shown on contract drawings.

#### 1.02 System Description

- A. Resiliently suspended gypsum ceilings, where shown on drawings, shall be isolated from the building structure in order to increase their ability to reduce airborne sound and impact noise transmission.

#### 1.03 Quality Assurance

- A. The resilient isolation hangers and perimeter isolation material shall be designed and fabricated at the facilities of a nationally recognized manufacturer having a minimum of five years experience in furnishing similar materials.

#### 1.04 Submittals

- A. Product performance data shall be submitted to the designer for review and shall include an Airborne Sound Transmission Loss Test Report and an Impact Sound Transmission Loss Test Report for measurements conducted in accordance with ASTM E90-90 and ASTM E492-90, respectively. Test reports shall document a minimum STC 84 and IIC 70 for a resiliently suspended ceiling attached below a six-inch thick concrete slab and that consists of two layers of 5/8" thick gypsum board with 3-1/2" thick glass fiber batt in the cavity between the concrete slab and the top layer of gypsum board. Sound and impact test reports shall be from an independent laboratory.

### Part 2 – Products

#### 2.01 Materials

- A. The sound isolation materials specified herein shall be designed and manufactured by Kinetics Noise Control, Inc. Dublin, Ohio.

- B. Ceilings suspended below either concrete and/or metal deck composite construction or structural framing shall be supported by resilient isolation hangers ICC. Resilient hangers shall have sufficient capacity to sustain continuously applied ceiling weight without settling after initial deflection.
- C. The isolation hanger shall be a combination high-deflection steel spring in series with a resilient, molded neoprene noise and vibration isolation pad. The steel spring and neoprene pad shall be incorporated into a stamped steel hanger assembly that resiliently supports the isolated ceiling.
- D. The hanger assembly bracket shall be designed to allow fifteen (15) degrees of vertical alignment of the suspension member without making metal-to-metal contact between the suspension and hanger assembly members. The hanger bracket shall be designed with an integral spring pre-load bracket selected to minimize change in elevation once a load is applied to the hanger and to hold the isolator assembly steady during attachment of gypsum board. The hanger assembly bracket shall consist of a leveling rod with an attached channel carrier designed to accept 1-1/2" x 1/2", 16-gauge cold-rolled steel. The isolation hanger deflection shall be selected by the manufacturer to provide a maximum natural frequency of 4.4 Hz. The steel spring element shall have a minimum Kx to Ky of 1 at its 1" rated deflection.
- E. Resiliently suspended ceilings shall be separated where non-isolated building components abut. Isolation material shall be 3/8" thick CPT perimeter isolation board. CPT shall not be penetrated by nail, screw, or similar fastener. CPT shall be adhered to non-isolated structure. Resiliently-suspended ceiling shall be constructed against CPT. CPT shall be sealed using resilient, non-hardening caulk.

## **Part 3 – Execution**

### **3.01 Installation**

- A. The installation of all sound isolation materials specified herein, including those installed under other sections of the specifications, shall be in accordance with procedures submitted by the isolation material manufacturer, and approved by the Architect.
- B. All building components supported by the isolation hangers shall be free from rigid contact with any part of the non-isolated building structure to prevent unwanted sound flanking.