

Model ICW Wood-Frame 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 ten 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 76 and IIC 62 for a resiliently suspended ceiling attached below a composite construction floor consisting of parquet flooring over 1-1/2" thick concrete which rests on 3/4" plywood sheathing attached to 2" x 10" wood joists spaced 16" o.c. The ceiling is constructed of two layers of 5/8" thick gypsum board with 3-1/2" thick glass fiber batt in the cavity between the layer of sheathing and the top layer of gypsum board. Sound and impact test reports shall be from an independent laboratory.
- B. Product data shall be provided to the designer demonstrating that the resilient isolation hanger both was tested for and did receive an unrestrained assembly rating of one-hour (1-hr) in a fire event when incorporated in a floor/ceiling composite construction. Fire Resistance Ratings shall be determined per procedures describe by ANSI/UL 263, and shall include use of 2x10 or larger-sized wood joists, parallel chord wood trusses, and UL Classified engineered wood I-joists.

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. Represented by KPA Architectural Products in New England – Contact Keith Peterson (508) 591-7500
- B. Ceilings suspended from wood-framed composite construction where the hanger can be attached to a wood joist shall be supported by resilient isolation hangers Model ICW. 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 K_x to K_y 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 Model SRP or Model CPT perimeter isolation board. Model SRP shall not be penetrated by nail, screw, or similar fastener. Model SRP shall be adhered to non-isolated structure. Resiliently-suspended ceiling shall be constructed against Model SRP. Model SRP 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. Contractor responsible for supplying all loads suspended by the isolation hangers and related documents for coordination, so that shop drawings can be performed by the manufacturer or its representative for proper layout and spring selection. Architect approved shop drawings required prior to installation.

- 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.