

Pliteq GenieClip® RST 3-Part Specification Guide

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including MasterFormat, SectionFormat, and PageFormat, contained in the CSI Manual of Practice.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

SECTION 09 22 16 NON-STRUCTURAL METAL FRAMING

Specifier Notes: This section covers Pliteq, Inc. "GenieClip" installed with acoustical sealant and drywall furring channels for support of gypsum board for acoustical separation (de-coupling) in walls and ceilings. Consult Pliteq Inc. for assistance in editing this section for the specific application.

Part 1.0 – General

1.1: Summary

1.1.1: The work of this section includes:

1.1.1.1: **GenieClip** resilient sound isolation clips installed with acoustical sealant and drywall furring channels for support of gypsum board for noise control (de-coupling) in walls and ceilings.

1.1.2: Related Sections: Section(s) related to this article include:

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- 1.1.2.1: Section 05400 – Cold-Formed Metal Framing
- 1.1.2.2: Section 06110 – Wood Framing
- 1.1.2.3: Section 07210 – Building Insulation
- 1.1.2.4: Section 07920 – Joint Sealants
- 1.1.2.5: Section 09110 – Non-Load-Bearing Wall Framing
- 1.1.2.6: Section 09250 – Gypsum Board
- 1.1.2.7: Section 09820 – Acoustical Insulation and Sealants

1.2: References

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

1.2.1: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority and standard designation.

1.2.2: American Society for Testing and Materials (ASTM)

1.2.2.1: AISI Specifications for Design of Cold-Formed Steel Structure Members

1.2.2.2: ASTM B633 – Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel

1.2.2.3: ASTM C645 – Standard Specification for Nonstructural Steel Framing Members

1.2.2.4: ASTM C754 – Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products

1.2.2.5: ASTM C840 Standard Specification for Application and Finishing of Gypsum Board

1.2.2.6: ASTM C1002 – Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs

1.2.2.7: ASTM D412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension

1.2.2.8: ASTM D573 – Standard Test Method for Rubber-Deterioration in an Air Oven

1.2.2.9: ASTM D2000 – Standard Classification System for Rubber Products in Automotive Applications

1.2.2.10: ASTM D2240 – Standard Test Method for Rubber Property – Durometer Hardness

1.2.2.11: UL Fire Resistance Directory. www.ul.com

1.3: Design Requirements

*Specifier Notes: The **GenieClip** acoustic assembly is a proprietary product used for fastening gypsum wallboard to a supporting structure, while simultaneously isolating it from vibration. This significantly reduces the amount of impact and airborne sound filtering from rooms above, below, and alongside.*

*To maximize the noise control capacity and potential of the **GenieClip**, a professional acoustical engineer should be consulted.*

*To maximize the acoustical performance of the **GenieClip**, it is recommended the dead or shear load not exceed 36 pounds per **GenieClip**.*

1.3.1: Dead or Shear Load: Maximum design load of 36 pounds per each **GenieClip**.

1.3.2: Conform to UL Fire Resistance Directory design assemblies, where required.

1.4: Submittals

1.4.1: General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

1.4.2: Product Data: Submit product data, including manufacturer's guide specifications product sheet, for specified products.

1.4.2.1: **Pliteq GenieClip**

1.4.2.2: Drywall Furring Channels

1.4.3: Samples: Submit selection and verification samples for finishes, colors, and textures.

1.4.3.1: **Pliteq GenieClip**

1.4.3.2: Drywall Furring Channels

1.4.4: Shop Drawings: Manufacturer's specifications, catalog cuts, and other items needed to demonstrate compliance with the specified requirements. Also the manufacturer's recommended installation procedures, which, when approved by the architect, will become the basis for accepting or rejecting actual installation procedures used on work.

1.4.5: Quality Assurance Submittals: Submit the following:

1.4.5.1: Certificates: If required, certification of performance characteristics specified in this document shall be provided by the manufacturer.

1.4.5.2: Manufacturer's Instructions: Manufacturer's installation instructions.

1.4.6: Closeout Submittals: Submit the following:

1.4.6.1: Warranty: Warranty documents specified herein.

1.5: Quality Assurance

1.5.1: Qualifications

1.5.1.1: Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

1.5.1.1.1: Certificate: When requested, submit certificate indicating qualification.

1.5.1.2: Manufacturers' Qualifications: Manufacturer capable of approving application method.

1.5.2: Regulatory Requirements: [specify applicable requirements of regulatory agencies].

1.5.3: Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer-approved installation methods. Comply with workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.

1.5.3.1: Mock-Up Size: As determined by acoustical consultant.

1.5.3.2: Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.

1.5.3.3: Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

1.5.4: Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's instructions, and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

1.5.5: Pre-installation Testing: Conduct pre-installation testing as follows: [specify substrate testing; consult with flooring manufacturer].

1.6: Delivery, Storage, and Handling

1.6.1: General: Comply with Division 1 Product Requirements Sections.

1.6.2: Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

1.6.3: Delivery: Deliver materials in manufacturer's original, unopened, and undamaged containers with identification labels intact.

1.6.4: Storage and Protection: Store materials at temperature and humidity conditions recommended by manufacturer and protect from exposure to harmful weather conditions.

1.7: Project Conditions

1.7.1: Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.

1.7.2: Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.8: Warranty

1.8.1: Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

1.8.1.1: The recommendations for applications and installation are based on our extensive experience and on current technological practice. Our liability and responsibility in the event of damages is limited to the extent defined in our General Terms and Conditions of Business and is not in any way increased by the above recommendations or by advice given by our sales representatives or applications engineering staff.

1.8.1.2: **Pliteq Inc.** is a corporation duly organized and validly existing under the laws of the province of Ontario. **Pliteq** offers a limited lifetime warranty on the **GenieClip** brand of Sound Transmission products against defects in material and workmanship and

that **GenieClip** shall meet all published specifications and shall perform effectively. **Pliteq** warranties that during the warranty period **GenieClip** shall not harden, become brittle, chip, crack, tear, or exhibit any signs of excessive deterioration except for normal wear and tear. All other warranties including implied warranties for a particular purpose are expressly excluded. The sole remedy against the seller will be the replacement or repair of the defective goods, or at seller's option, credit may be issued not exceeding the selling price of the defective goods.

1.9: Maintenance

1.9.1: Extra Materials: Deliver to Owner extra materials from the same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.

1.9.1.1: Quantity: Furnish quantity of molded rubber and steel resilient sound isolation clip units as requested on purchase order.

1.9.1.2: Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage, and protection of extra materials.

Part 2.0 – Proprietary Manufacturer/Products

2.1: Manufacturer: **Pliteq** Inc.

2.1.1: Address: 131 Royal Group Crescent, Vaughan, ON L4H 1X9; Telephone: (416) 449-0049; Fax: (416) 849-0415; Email: info@pliteq.com

2.2: Proprietary Product(s)

2.2.1: **Pliteq GenieClip** Resilient Sound Isolation Clip manufactured by **Pliteq** Inc.

2.3: **Pliteq GenieClip** Resilient Sound Isolation Clip

2.3.1: Product Name: The molded rubber and steel resilient sound isolation clip furnished under this specification shall be **Pliteq GenieClip** Resilient Sound Isolation Clip

2.3.2: Rubber Isolator:

2.3.2.1: Compressible elastomer, low durometer rubber compound.

2.3.2.2: Unibody design.

2.3.2.3: Manufactured to ASTM D2000, M2 AA 510 A13, which includes:

2.3.2.3.1: Hardness, ASTM D2240, Shore A: 37

2.3.2.3.2: Modulus 300 Percent, ASTM D412, Die C: 5.3 MPa

2.3.2.3.3: Tensile Strength, ASTM D412, Die C: 11.2 MPa

2.3.2.3.4: Elongation at Break, ASTM D573: 454 percent

2.3.2.4: Laboratory tested to ASTM D5992, ASTM D4473, ASTM D4065 for the properties:

2.3.2.4.1: Dynamic Stiffness: 11.3 N/mm

2.3.2.4.2: Ratio of Dynamic to Static Stiffness: 1.19

2.3.2.4.3: Force/Deflection: 8.95 N/mm

- 2.3.3: Clip: Galvanized steel with 90 micron aluminum-zinc coating
- 2.3.4: PATENT No.: 7,895,803
- 2.3.5: Projection: 1-5/8 inches from supporting structure, when 7/8-inch drywall furring channels are used.
- 2.3.6: Specified product must support the following minimum structural requirements:
 - 2.3.6.1: An ultimate load before failure of 445 lbs in direct withdrawal with 25 Gauge channel, ASTM D1761
 - 2.3.6.2: An ultimate load before failure of 229 lbs in lateral resistance (shear), ASTM D1761
 - 2.3.6.3: Minimum **GenieClip** Fastener Pullout and Shear: 108 lbs
- 2.3.7: Specified product must have been tested in more than 100 assemblies to ASTM E90 and E492 in a NVLAP certified laboratory and comply with ASTM standards.
- 2.3.8: Shall be UL listed.

*Specifier Notes: The following materials are not furnished by **Pliteq Inc.***

2.4: Drywall Furring Channels (Hat Track)

- 2.4.1: Material: Cold-formed galvanized steel.
- 2.4.2: Conformance:
 - 2.4.2.1: AISI Specifications for Design of Cold-Formed Steel Structural Members
 - 2.4.2.2: ASTM C645
 - 2.4.2.3: ASTM C754
- 2.4.3: Designation: Steel Stud Manufacturers Association (SSMA) Code 087F125-18 (25 gauge).
 - 2.4.3.1: Size: 0.0188 inch (0.478 mm) thick, 7/8 inch (22.225 mm) height, between 2-1/2 inches (63.5 mm) and 2-11/16 inches (68.2625 mm) width
 - 2.4.3.2: Hemmed edge detail

2.5: Mechanical Fasteners

- 2.5.1: Type: Self-drilling, self-tapping screws. Steel, ASTM C1002. Galvanized coating, plated, or oil-phosphate coated, ASTM B633, as needed for required corrosion resistance.
- 2.5.2: **GenieClip** Connections:
 - 2.5.2.1: To Wood Framing Members: Screws 2-1/2 inches (63 mm) minimum length, #8 minimum shank, Type W (course thread), bugle- or hex-head screws of equal or greater size.
 - 2.5.2.1.1: Minimum Pullout and Shear: 108 pounds

2.5.2.2: To Steel Framing Members (Less than 20 Gauge): Screws 1-1/2 inches (38 mm) minimum length; #8 minimum shank; Type S (fine thread); bugle-, wafer-, or hex-head screws of equal or greater size.

2.5.2.2.1: Minimum Pullout and Shear: 108 pounds

2.5.2.3: To Steel Framing Members (20 Gauge through 12 Gauge): Screws 1-1/2 inches (38 mm) minimum length; #8 minimum shank; Type S (fine thread); self-drilling tip; bugle-, wafer-, or hex-head screws of equal or greater size.

2.5.2.3.1: Minimum Pullout and Shear: 108 pounds

2.5.2.4: To Concrete: Anchors 1-3/4 inches (44 mm) minimum length, 3/16-inch to 1/4-inch diameter. Mushroom head or screw-in type anchor in accordance with fastener manufacturer's instructions. Powers Fasteners or approved equal.

2.5.2.4.1: Minimum Pullout and Shear: 108 pounds

2.5.2.5: To Concrete Masonry Units: Anchors 2-1/4 inches (57 mm) minimum length, 1/4-inch diameter. Designed for use in concrete masonry units in accordance with fastener manufacturer's instructions. Powers Fasteners or approved equal.

2.5.2.5.1: Minimum Pullout and Shear: 108 pounds

2.5.3: Drywall Furring Channel Lap Joint Connection, Steel to Steel: Framing screws, button head, 7/16 inch (11 mm) minimum length, #6 minimum shank, needle point, Phillips drive or greater, or double-wire tie with 18 gauge tie wire.

2.6: Tie Wire

2.6.1: Type: 12 gauge, annealed, galvanized steel.

2.7: Fire/Smoke Sealant

2.7.1: Type: Flexible, non-hardening. Classified as an acoustical sealant. As specified in Section 07920.

2.8: Putty Pad Sealant

2.8.1: Type: Control noise transmission and fire resistance at electrical boxes and other penetrations. As specified in Section 07920.

2.9: Product Substitutions

2.9.1: Substitutions: No substitutions permitted

2.10: Related Materials

2.10.1: Related Materials: Refer to other sections listed in Related Sections paragraph for related materials

2.11: Source Quality

2.11.1: Source Quality: Obtain Reduced Sound Transmission materials from a single manufacturer

Part 3.0 – Execution

3.1: Manufacturers' Instructions

3.1.1: Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

3.2: Examination

3.2.1: 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 – General

3.3.1: Install **GenieClip**, sealant, and drywall furring channels in accordance with manufacturer's instructions.

3.3.2: Mechanically fasten **GenieClip** to structure with screws, bolts, or anchors, dependent upon structure.

3.3.3: Fire-Resistive Design Assemblies:

3.3.3.1: Install as specified in UL Fire Resistance Directory, where required.

3.3.4: Space **GenieClip** at maximum of 24 inches (600 mm) by 48 inches (1,200 mm) on center for walls and ceilings.

3.3.5: Do not exceed design load (pull and shear) of 36 pounds per **GenieClip**.

3.3.6: Stagger **GenieClip** installation, so dead load is supported by all support members.

3.3.7: Splicing Drywall Furring Channels:

3.3.7.1: Splice drywall furring channels with minimum of 6-inch (150-mm) laps.

3.3.7.2: Secure laps with 2 framing screws or 18 gauge tie wire double wrapped.

3.3.7.3: Locate splices between **GenieClip**.

3.3.7.4: Do not locate splices on **GenieClip**.

3.3.8: Install **GenieClip** on 1 side of wall assembly, unless otherwise indicated on the drawings.

3.3.9: Flanking Noise

- 3.3.9.1: Review installation details to prevent structure-borne flanking noise.
- 3.3.9.2: Do not allow drywall furring channels or gypsum board to contact foreign materials, including floors, ceilings, or wall framing members.

3.3.10: Ensure rubber isolator of **GenieClip** is in firm contact with structural member.

3.3.11: Gypsum Board:

- 3.3.11.1: Install gypsum board in vertical or horizontal position with 1/8-inch (3-mm) to 1/4-inch (6-mm) gap around perimeter for acoustical sealant application.
- 3.3.11.2: Install gypsum board in accordance with ASTM C840 as specified in Section 09250

3.3.12: Acoustical Sealant

- 3.3.12.1: Seal potential air leaks with acoustical sealant to achieve best Field Sound Transmission Class (FSTC).
- 3.3.12.2: Seal electrical outlets and penetrations with acoustical sealant.
- 3.3.12.3: Apply fire-rated acoustical sealant at locations where fire-rated assembly is required.

3.3.13: Putty Pad Sealant:

- 3.3.13.1: Acoustically seal with putty pads, electrical boxes in walls and ceilings in which **GenieClips** are used

3.4: Installation – Walls

*Specifier Notes: Special consideration should be given to concentrated and uniform load conditions, such as cabinets. Special consideration should be given to all penetrations to ensure the control of STC noise transfer. Consult **Pliteq Inc.** for additional information.*

- 3.4.1: Install drywall furring channels perpendicular to framing members.
- 3.4.2: Space drywall channels maximum of 24 inches (600mm) on center.
- 3.4.3: Locate first drywall furring channel parallel to floor and maximum of 3 inches (75mm) above floor and 1 drywall furring channel maximum of 6 inches (150 mm) from ceiling.

3.5: Installation – Ceilings

*Specifier Notes: Special consideration should be given to all penetrations, such as recessed light fixtures, electrical boxes, exhaust fans, and sprinkler heads to ensure the control of both STC and IIC noise transfer. Consult **Pliteq Inc.** for additional information.*

- 3.5.1: Install drywall furring channels perpendicular, parallel, or angular to framing members.
- 3.5.2: Space Drywall Furring Channels:

3.5.2.1: Maximum of 24 inches (600 mm) on center with:

- 3.5.2.1.1: Single layer of 5/8-inch (16-mm) gypsum board
- 3.5.2.1.2: Double layer of 5/8-inch (16-mm) gypsum board, weighing less than 2.25 pounds per square foot per layer
- 3.5.2.1.3: Single layer of 1/2-inch (12-mm) high-strength gypsum board
- 3.5.2.1.4: Double layer of 1/2-inch (12-mm) high-strength gypsum board

3.5.2.2: Maximum of 16 inches (400 mm) on center with:

- 3.5.2.2.1: Single layer of 5/8-inch (16-mm) gypsum board
- 3.5.2.2.2: Double layer of 5/8-inch (16-mm) gypsum board
- 3.5.2.2.3: Single layer of 1/2-inch (12-mm) regular-strength gypsum board
- 3.5.2.2.4: Double layer of 1/2-inch (12-mm) regular-strength gypsum board

3.5.3: Locate **GenieClip** maximum of 6 inches (150 mm) from ends of drywall furring channels.

3.5.4: Locate drywall furring channels maximum of 3 inches (75 mm) from parallel wall assemblies.

3.6: Field Quality Requirements:

- 3.6.1: Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations in accordance with manufacturer's instructions.
- 3.6.2: Field Tests should be performed by an independent acoustical laboratory accredited by the U.S. Department of Commerce, National Institute of Standards and Technology under the National Voluntary Laboratory Accreditation Program for the specified test procedure.
- 3.6.3: The cost for all field acoustical testing, corrective work associated with the installation of the resilient sound isolation clips, walls, and ceilings to meet the minimum requirements, shall be borne by the flooring contractor(s).

3.7: Cleaning

- 3.7.1: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.8: Protection

- 3.8.1: Protection: Protect installed product and finish surfaces from damage during construction

3.9: Schedules

- 3.9.1: Schedules: [Specify reference to applicable schedules].

END OF SECTION