SECTION 09 64 00

WOOD DANCE FLOORING

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\*\* NOTE TO SPECIFIER \*\* Harlequin Floors; wood stage floors, sprung floors and vinyl/marley dance floors.  
This section is based on the products of Harlequin Floors, which is located at:1531 Glen Ave.Moorestown, NJ 08057Toll Free Tel: 800-642-6440Fax: 856-231-4403Email: [request info (contact@harlequinfloors.com)](https://arcat.com/rfi?action=email&company=Harlequin%252BFloors&message=RE%253A%2520Spec%2520Question%2520(09647ahc)%253A%2520&coid=42807&spec=09647ahc&rep=&fax=856-231-4403)  
Web: <https://us.harlequinfloors.com>   
 [ [Click Here](https://arcat.com/company/harlequin-floors-42807) ] for additional information.  
Recognized as world leaders in advanced technology flooring for dance, performing arts, entertainment and display, Harlequin Floors is established worldwide with operations in the Americas, Europe, Asia Pacific and Australia. American Harlequin Corporation is headquartered in Moorestown, NJ (Philadelphia, PA region) with offices in Fort Worth and Los Angeles.  
We offer a complete range of permanent and portable, vinyl and sprung floors for dance and stage. Our team of Flooring Specialists provide clients with expert guidance on products, design, installation and maintenance in order to deliver a customized flooring solution that meets their requirements.

1. GENERAL
   1. SECTION INCLUDES
      1. Wood dance flooring system.
         1. Sprung floor system. (Harlequin Activity Sprung Floor System)
         2. Sprung floor system. (Harlequin WoodSpring Sprung Floor System)
         3. Sprung floor system. (Harlequin Liberty LatchLoc Sprung Floor System)
         4. Sprung floor system. (Harlequin Liberty LatchLoc Stage Sprung Floor System)
         5. Sprung floor system. (Harlequin Liberty HD Sprung Floor System)
         6. Sprung floor system. (Harlequin AeroDeck Sprung Floor System)
         7. Sprung or rigid floor system. (Harlequin Liberty Switch)
         8. Sprung floor system. (Harlequin Flexity Sprung Floor System)
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete (03 30 00) - Cast-in-Place Concrete.
    2. Section 06 20 00 - Finish Carpentry (06 20 00) - Finish Carpentry.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each finished product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color samples representing manufacturer's full range of available colors and patterns.
    2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
  1. QUALITY ASSURANCE
     1. Installer Qualifications: Installer shall have at least three years experience in installing similar dance floor systems and shall be approved by the manufacturer.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, and gloss are approved by Architect.
       3. Rebuild mock-up area as required to produce acceptable work.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging until ready for installation.
  2. PROJECT CONDITIONS
     1. The flooring system shall not be delivered and installed until all masonry, plastering, tile work and all overhead mechanical and electrical trades are completed and building is enclosed and weather tight.
     2. Permanent heat, light and ventilation shall be installed and operating during and after installation, maintaining a temperature range of 65 to 75 degrees F (18 to 24 degrees C) and a relative humidity range of 35 percent to 50 percent.
     3. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  3. WARRANTY
     1. Manufacturer warrants its sub floor construction materials to be free from manufacturing defects for a minimum of two years and its integrated vinyl surfaces to be free from manufacturing defects for five years.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Harlequin Floors, which is located at:1531 Glen Ave.Moorestown, NJ 08057Toll Free Tel: 800-642-6440Fax: 856-231-4403Email: [request info (contact@harlequinfloors.com)](https://arcat.com/rfi?action=email&company=Harlequin%252BFloors&message=RE%253A%2520Spec%2520Question%2520(09647ahc)%253A%2520&coid=42807&spec=09647ahc&rep=&fax=856-231-4403);Web: <https://us.harlequinfloors.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Harlequin Activity Sprung Floor System. Delete if not required.

* 1. HARLEQUIN ACTIVITY SPRUNG FLOOR SYSTEM
     1. System: A sprung or floating dance floor system consisting of a sub floor construction utilizing system specific components with an integrated surface.
        1. Product: Harlequin Activity Sprung Floor System by American Harlequin Corporation.

\*\* NOTE TO SPECIFIER \*\* Delete surface not required.

* + - 1. Surface: Vinyl.
      2. Surface: Hardwood.
    1. Performance:
       1. Uniform Distribution Load: Greater than 208 lb per sq ft (10 kN per sq m).
       2. Point Load: Greater than 809 lbs (3599 N).
       3. Rolling Load: Greater than 337.2 lbs (1500 N).
       4. Average Shock Absorption: 64 percent.
       5. Vertical Deformation: 0.15 inch (3.8 mm).
       6. Area Deflection: 7.20 percent
       7. Testing Standards: DIN 18032-2
       8. Fire Rating: Bfls 1 to EN 13501

\*\* NOTE TO SPECIFIER \*\* Delete surface not required.

* + - 1. Weight with Vinyl Surface: 5.1 lbs per sq ft (0.244 kPa)
      2. Weight with Hardwood Surface: 6.8 lbs per sq ft (0.326 kPa)
      3. Overall Thickness: 2 inches (51 mm) nominal.
         1. With Vinyl: 2-1/8 inch (54 mm)nominal.
         2. With Hardwood: 2-1/4 (57 mm) inch nominal.
    1. Performance Surface:

\*\* NOTE TO SPECIFIER \*\* Delete performance surfaces not required.

* + - 1. Vinyl Performance Surface: Harlequin Cascade, Thickness: 0.080 inch (2 mm).
      2. Vinyl Performance Surface: Harlequin Fiesta, Thickness: 0.080 inch (2 mm).
      3. Vinyl Performance Surface: Harlequin Standfast, Thickness: 0.100 inch (2.6 mm).
      4. Vinyl Performance Surface: Harlequin Studio, Thickness: 0.120 inch (3 mm).
      5. Vinyl Performance Surface: Harlequin Studio B, Thickness: 0.120 inch (3 mm).
      6. Hardwood Performance Surface: Prefinished hardwood surface, Thickness: 0.75 inch (19 mm).
    1. Top Panel, Sub-surface: Semi-flexible Harlequin moisture resistant suspension panels.
    2. Lower Panel, Sub-surface: Semi-flexible, Harlequin moisture resistant suspension panels.
    3. Progressive Resistance Suspension 2 layers: Synthetic, open cell, cellular urethane.
    4. Damp-proof Membrane: 6 mil (0.15 mm) polyethylene.
    5. Edge Trim, Skirting Profile: "P" rubber/polyurethane composite extrusion 4 inches (102 mm) high with 1 inch (25 mm) toe, black.

\*\* NOTE TO SPECIFIER \*\* Harlequin WoodSpring Sprung Floor System. Delete if not required.

* 1. HARLEQUIN WOODSPRING SPRUNG FLOOR SYSTEM
     1. System: A sprung or floating dance floor system consisting of a sub floor construction utilizing system specific components with an integrated surface.
        1. Product: Harlequin WoodSpring Sprung Floor System by American Harlequin Corporation.

\*\* NOTE TO SPECIFIER \*\* Delete surface not required.

* + - 1. Surface: Vinyl.
      2. Surface: Hardwood.
    1. Performance:
       1. Uniform Distribution Load: Greater than 208 lb per sq ft (10 kN per sq m).
       2. Point Load: Greater than 809 lbs (3599 N).
       3. Rolling Load: greater than 337.2 lbs (1500 N).
       4. Average Shock Absorption: 64 percent.
       5. Vertical Deformation: 0.13 inches (3.3 mm).
       6. Area Deflection: 14.90 percent.
       7. Testing Standards: DIN 18032-2.
       8. Fire Rating: Bfls 1 to EN 13501.
       9. Weight with Vinyl Surface: 5.6 lbs per sq ft (0.268 kPa).
       10. Weight with Hardwood Surface: 7 lbs per sq ft (0.335 kPa).
       11. Overall Thickness: 3-1/2 inch (89 mm) nominal.
           1. With Vinyl: 3-5/8 inch (92 mm) nominal.
           2. With Hardwood: 4-1/4 inch (108 mm) nominal.
    2. Performance Surface:

\*\* NOTE TO SPECIFIER \*\* Delete performance surfaces not required.

* + - 1. Vinyl Performance Surface: Harlequin Cascade, Thickness: 0.080 inch (2 mm).
      2. Vinyl Performance Surface: Harlequin Fiesta, Thickness: 0.080 inch (2 mm).
      3. Vinyl Performance Surface: Harlequin Standfast, Thickness: 0.100 inch (2.6 mm).
      4. Vinyl Performance Surface: Harlequin Studio, Thickness: 0.120 inch (3 mm).
      5. Vinyl Performance Surface: Harlequin Studio B, Thickness: 0.120 inch (3 mm).
      6. Hardwood Performance Surface: Prefinished Hardwood Surface, Thickness: 0.75 inch (19 mm).

\*\* NOTE TO SPECIFIER \*\* Delete vinyl performance surface, lower panel, sub-surface paragraph if not required.

* + 1. Vinyl Performance Surface, Lower Panel, Sub-surface: Semi-flexible, Flooring Grade underlayment panels. Top Panel, Sub-surface: Semi-flexible, moisture-resistant suspension panels.
    2. Three layers of stringers.
    3. Progressive Resistance Suspension: Rubber suspension pads.

\*\* NOTE TO SPECIFIER \*\* Harlequin Liberty LatchLoc Sprung Floor System. Delete if not required.

* 1. HARLEQUIN LIBERTY LATCHLOC SPRUNG FLOOR SYSTEM
     1. System: The Harlequin Liberty LatchLoc Panel floor is comprised of multiple, fully pre-manufactured, panels that are joined by means of a rounded tongue and groove interconnection, with a latching system specific to Harlequin Liberty LatchLoc Sprung Dance Floor Panels. Panel uniformity shall be achieved by utilization of raw materials and manufacturing techniques over which exacting quality control is exercised. The nature and specific placement pattern of the progressively resistant Dual-Durometer Suspension Towers adhered to the underside of the panel produces a safe suspension that is uniform and consistent across the entirety of the assembled floor surface. Delivered in standard panel sizes of 48 by 96 inches (1219 by 2438 mm) and 48 by 48 inches (1219 by 1219 mm) panels are easily installed with one turn of an allen key. The method of installation and panel connection permits subsequent relocation of the Harlequin Liberty LatchLoc Panel System.
        1. Product: Harlequin Liberty LatchLoc Sprung Floor System by American Harlequin Corporation.
     2. Performance:
        1. Uniform Distribution Load: Greater than 208 lb per sq ft (10 kN per sq m).
        2. Point Load: Greater than 809 lbs (3599 N).
        3. Rolling Load: Greater than 337.2 lbs (1500 N).
        4. Average Shock Absorption: 67 percent.
        5. Vertical Deformation: 0.16 (4.1 mm)
        6. Area Deflection: 12.80 percent
        7. Testing Standards: DIN 18032-2
        8. Fire Rating: Bfls 1 to EN 13501
        9. Weight per Panel: Full Size: 92 lbs (41.73 kg). Half Size: 46 lbs (20.86 kg).
        10. Overall Thickness: 1-1/2 inch (38 mm) nominal.
            1. With Vinyl Surface: 1-5/8 inch (41 mm) nominal.
     3. Performance Surface:

\*\* NOTE TO SPECIFIER \*\* Delete performance surfaces not required.

* + - 1. Vinyl Performance Surface: Harlequin Cascade, Thickness: 0.080 inch (2 mm).
      2. Vinyl Performance Surface: Harlequin Fiesta, Thickness: 0.080 inch (2 mm).
      3. Vinyl Performance Surface: Harlequin Reversible, Thickness: 0.050 inch (1.3 mm).
      4. Vinyl Performance Surface: Harlequin Reversible Pro, Thickness: 0.060 inch (1.5 mm).
      5. Vinyl Performance Surface: Harlequin Standfast, Thickness: 0.100 inch (2.6 mm).
      6. Vinyl Performance Surface: Harlequin Studio, Thickness: 0.120 inch (3 mm).
      7. Vinyl Performance Surface: Harlequin Studio B, Thickness: 0.120 inch (3 mm).
    1. Panel: 11/16 inch (18 mm) thick, composed of Northern grade Birch, resin bonded.
    2. Face: Birch face, engineered hardwood core compressed with water resistant phenolic resins yielding void free density of 41.3 lbs per cu ft (656 kg per cu m), cross band reinforced.
    3. Suspension: Synthetic, closed cell, cellular urethane, 3/4 inch (19 mm) thick, (length, width, and pattern of placement as engineered by manufacturer), Dual-Durometer, combined low and high modulus. Flammability Burn Rate (inches per minute): 0.
    4. Finish: Clear, abrasion resistant, nonflammable, polyurethane.
    5. Tongue: Dowel, hardwood, uniform concentricity, diameter 3/8 inch (9.5 mm), length variable.

\*\* NOTE TO SPECIFIER \*\* Harlequin Liberty Latch Loc Sprung Floor System. Delete if not required.

* 1. HARLEQUIN LIBERTY LATCHLOC STAGE SPRUNG FLOOR SYSTEM
     1. System: The Harlequin Liberty LatchLoc Stage Sprung Floor System is comprised of multiple, fully pre-manufactured, panels that are joined by means of a rounded tongue and groove interconnection, with a latching system specific to Harlequin Liberty LatchLoc Stage Sprung Floor Panels. Panel uniformity shall be achieved by utilization of raw materials and manufacturing techniques over which exacting quality control is exercised. The nature and specific placement pattern of the progressively resistant Dual-Durometer Suspension Towers adhered to the underside of the panel produces a safe suspension that is uniform and consistent across the entirety of the assembled floor surface. Panels have tempered hardboard attached to underside for ease of sliding panels into position and to protect the elastomer blocks. Delivered in standard panel sizes of 48 by 96 inches (1219 by 2438 mm) and 48 by 48 inches (1219 by 1219 mm) panels are easily installed with one turn of an 'allen' key. The method of installation and panel connection permits subsequent relocation of the Harlequin Liberty LatchLoc Stage Panel System.
        1. Product: Harlequin Liberty Latchloc Stage Sprung Floor System by American Harlequin Corporation.
     2. Performance:
        1. Uniform Distribution Load: Greater than 208 lb per sq ft (10 kN sq m).
        2. Point Load: Greater than 809 lbs (3599 N).
        3. Rolling Load: greater than 337.2 lbs (1500 N).
        4. Average Shock Absorption:67 percent.
        5. Vertical Deformation: 0.16 inches (4.1 mm).
        6. Area Deflection: 12.80 percent.
        7. Testing Standards: DIN 18032-2.
        8. Fire Rating: Bfls 1 to EN 13501.
        9. Weight per Panel: Full Size: 94 lbs (42.64 kg). Half Size: 47 lbs (21.32).
        10. Overall Thickness: 1-1/2 inch (38 mm) nominal.
            1. With Vinyl Surface: 1-5/8 inch (41 mm) nominal.
     3. Performance Surface:

\*\* NOTE TO SPECIFIER \*\* Delete performance surfaces not required.

* + - 1. Vinyl Performance Surface: Harlequin Cascade, Thickness: 0.080 inch (2 mm).
      2. Vinyl Performance Surface: Harlequin Fiesta, Thickness: 0.080 inch (2 mm).
      3. Vinyl Performance Surface: Harlequin Reversible, Thickness: 0.050 inch (1.3 mm).
      4. Vinyl Performance Surface: Harlequin Reversible Pro, Thickness: 0.060 inch (1.5 mm).
      5. Vinyl Performance Surface: Harlequin Standfast, Thickness: 0.100 inch (2.6 mm).
      6. Vinyl Performance Surface: Harlequin Studio, Thickness: 0.120 inch (3 mm).
      7. Vinyl Performance Surface: Harlequin Studio B, Thickness: 0.120 inch (3 mm).
    1. Panel: 11/16 inch (18 mm) thick, composed of Northern grade Birch, resin bonded.
    2. Face: Birch face, engineered hardwood core compressed with water resistant phenolic resins yielding void free density of 41.3 lbs per cu ft (656 kg per cu m), cross band reinforced.
    3. Suspension: Synthetic, closed cell, cellular urethane, 3/4 inch (19 mm) thick, (length, width, and pattern of placement as engineered by manufacturer), Dual-Durometer, combined low and high modulus. Flammability Burn Rate (inches per minute): 0.
    4. Finish: Clear, abrasion resistant, nonflammable, polyurethane.
    5. Tongue: Dowel, hardwood, uniform concentricity, diameter 3/8 inch (9.5 mm), length variable.
    6. Bottom: Attached to suspension towers of stage panel model, 1/8 inch (3 mm) hardboard; tempered.
  1. HARLEQUIN LIBERTY HD SPRUNG FLOOR SYSTEM
     1. System: Panels install as a permanent or portable floor. Panels are laid on the sub-floor in brickwork fashion so cross joins do not coincide. Panels join together by a rounded tongue and groove and secured using a single turn key latch and lock mechanism. Panels are overlaid with black polymer resin on both sides with a textured, wear resistant, anti-slip, water resistant high-grip pattern on the top surface. Panels are finished with an appropriate Harlequin vinyl performance floor. Panels and vinyl performance floor can be stored in carts, for stage crew to move.
        1. Product: Harlequin Liberty HD Sprung Floor System by American Harlequin Corporation.
     2. Performance: For challenging environments.
        1. Uniform Distribution Load: Greater than 208 lb per sq ft (10kN sq m).
        2. Point Load: Greater than 809 lbs (3599 N).
        3. Rolling Load: Greater than 337.2 lbs (1500 N).
        4. Average Shock Absorption: 67 percent.
        5. Vertical Deformation: 0.16 (4.1 mm)
        6. Area Deflection: 12.80 percent
        7. Testing Standards: DIN 18032-2
        8. Fire Rating: Bfls 1 to EN 13501
        9. Weight per Panel: Full Size: 84 lbs (38.1). Half Size: 42 lbs (19.05 kg).
        10. Overall Thickness: 1-1/2 inch (38 mm) nominal.
            1. With Vinyl Surface: 1-5/8 inch (41 mm) nominal.
     3. Performance Surface:

\*\* NOTE TO SPECIFIER \*\* Delete performance surfaces not required.

* + - 1. Vinyl Performance Surface: Harlequin Cascade. Thickness: 0.080 inch (2 mm).
      2. Vinyl Performance Surface: Harlequin Fiesta. Thickness: 0.080 inch (2 mm).
      3. Vinyl Performance Surface: Harlequin Freestyle. Thickness: 0.180 inch (4.5 mm).
      4. Vinyl Performance Surface: Harlequin Hi-Shine. Thickness: 0.060 inches (1.5 mm).
      5. Vinyl Performance Surface: Harlequin Marine. Thickness: 0.080 inch (2 mm).
      6. Vinyl Performance Surface: Harlequin Reversible. Thickness: 0.050 inch (1.3 mm).
      7. Vinyl Performance Surface: Harlequin Reversible Pro. Thickness: 0.060 inch (1.5 mm).
      8. Vinyl Performance Surface: Harlequin Standfast. Thickness: 0.100 inch (2.6 mm).
      9. Vinyl Performance Surface: Harlequin Studio. Thickness: 0.120 inch (3 mm).
      10. Vinyl Performance Surface: Harlequin Studio B. Thickness: 0.120 inch (3 mm).
    1. Panels: Birch plywood, 1-1/2 inches (38 mm).
    2. Panel Overlay: A 220 g black polymer resin on both sides of the plywood. The wear side has a textured, high grip pattern; the reverse side is smooth.
    3. Vibration Isolation: Dual density shock dampening elastomer pads at predetermined intervals.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. HARLEQUIN AERODECK SPRUNG FLOOR SYSTEM
     1. System: The Harlequin AeroDeck Panel floor is comprised of multiple, fully pre-manufactured, panels that are joined by means of a modified tongue and groove interconnection, with a latching system specific to Harlequin AeroDeck Sprung Dance Floor Panels. Panel uniformity shall be achieved by utilization of raw materials and manufacturing techniques over which exacting quality control is exercised. The nature and specific placement pattern of the progressively resistant Dual-Durometer Suspension Towers adhered to the underside of the panel produces a safe suspension that is uniform and consistent across the entirety of the assembled floor surface. Delivered in standard panel sizes of 48 by 96 inches (1219 by 2438 mm) and 48 by 48 inches (1219 by 1219 mm) panels are easily installed with one turn of an 'Hex' key. The method of installation and panel connection permits subsequent relocation of the Harlequin Panel Floor System.
        1. Product: Harlequin AeroDeck Sprung Floor System by American Harlequin Corporation.
     2. Performance:
        1. Point Load: 321 lbs (1428 N).
        2. Average Shock Absorption: 67 percent.
        3. Vertical Deformation: 0.16 (4.1 mm)
        4. Area Deflection: 12.80 percent.
        5. Testing Standards: DIN 18032-2.
        6. Fire Rating: IMO FTPC Parts 2 and 5.
        7. Weight per Panel: Full Size: 52 lbs (23.587 kg). Half Size: 26 lbs (11.793 kg).
        8. Overall Thickness: 1-13/16 inches (46 mm) nominal.
           1. With Vinyl Surface: 1-15/16 inches (49 mm) nominal.
     3. Performance Surface:

\*\* NOTE TO SPECIFIER \*\* Delete performance surfaces not required.

* + - 1. Vinyl Performance Surface: Harlequin Cascade, Thickness: 0.080 inch (2 mm).
      2. Vinyl Performance Surface: Harlequin Fiesta, Thickness: 0.080 inch (2 mm).
      3. Vinyl Performance Surface: Harlequin Reversible, Thickness: 0.050 inch (1.3 mm).
      4. Vinyl Performance Surface: Harlequin Reversible Pro, Thickness: 0.060 inch (1.5 mm).
      5. Vinyl Performance Surface: Harlequin Standfast, Thickness: 0.100 inch (2.6 mm).
      6. Vinyl Performance Surface: Harlequin Studio, Thickness: 0.120 inch (3 mm).
      7. Vinyl Performance Surface: Harlequin Studio B, Thickness: 0.120 inch (3 mm).
    1. Panel: 1-1/16 inch (26.98 mm) thick, balanced construction, single piece.
    2. Face: Engineered Fiber resonated panels, Polyethylene honeycomb core compressed with water proof phenolic resins yielding void free density of 41.3 lbs per cu ft (656 kg per cu m).
    3. Suspension: Synthetic, closed cell, cellular urethane, 3/4 inch (19 mm) thick, (length, width, and pattern of placement as engineered by manufacturer), Dual-Durometer, combined low and high modulus. Flammability Burn Rate (inches per minute): 0.
    4. Finish: Clear, abrasion resistant, nonflammable, fiber glass panels.
    5. Tongue: Dowel incorporated to panel edge at a uniform concentricity, diameter 3/8 inch (9.5 mm), length variable.

\*\* NOTE TO SPECIFIER \*\* Delete if not required. To be specified with a Harlequin Liberty LatchLoc Sprung Floor System. It is designed for venues who regularly put on both dance and theatrical performances and require both a sprung and a rigid floor in the same performance or rehearsal space. Enables a Harlequin Liberty LatchLoc sprung floor to be transformed to a rigid (unsprung) floor quickly and easily.

* 1. HARLEQUIN LIBERTY SWITCH
     1. System: The Harlequin Liberty Switch Panel floor system. A professional multi-use, low maintenance floor system which transforms between a rigid theatrical floor and a sprung performance dance floor at the touch of a button. Recommended for use with a Harlequin performance top surface.
        1. Floor System: Base units, with drive and control mechanisms, topped with Harlequin sprung floor panels.

\*\* NOTE TO SPECIFIER \*\* Delete track system option not required. Custom track systems are available for various load and space requirements. Contact Manufacturer for more information.

* + - * 1. Standard Track System: 3 track.
        2. Custom Track System: 2-4 track.
        3. May be configured to incorporate features such as traps, lifts and revolves as required.
        4. Can be "zoned" to create sprung or ridged areas within floor as required.
        5. Transforms from rigid to sprung mode in under 30 seconds; subject to size of installation and power supply requirement.
      1. Base Units: House a series of moving carriages connected by side bars running on guide rails powered by actuators located at the ends of each row.
         1. Moving Carriages: Engage with stop blocks on underside of Harlequin sprung floor panels to create a rigid floor and disengage to create a sprung floor.
         2. Base Unit: Fitted with elastomer support battens which align with the sprung elastomer pads on the Harlequin sprung floor panel above.
         3. Top Panels: Harlequin sprung floor panels with addition of ultra-high molecular weight polyethylene (UHMWPE) low-friction blocks on the underside at predetermined centers.
      2. Actuators and Associated Controller: Link to a hard-wired master control unit that is operated remotely. Compatible with stage machinery control systems.

\*\* NOTE TO SPECIFIER \*\* Delete controls options not required. Wireless available in the U.S.A. only

* + - 1. Controls: Hard-wired master control unit.
      2. Controls: Wireless with remote monitoring.
      3. Installation: By Harlequin's technical teams.
    1. Performance:
       1. Point Load: Greater than 809 lbs (3.6 kN).
       2. Distributed Load: Greater than 626 lbs per sq ft (30 kN per sq m); Standard 3 track system.
       3. Weight: 5.5 lbs per sq ft (Standard 3 track system).
       4. Overall Thickness: Total thickness of the Harlequin Liberty Switch System is 3-5/8 inch (91mm) nominal. Standard top panel thickness is 3/4 inch (18mm).
       5. Base and Top Panels: 94-1/2 x 47-1/4 inches (1200 x 2400 mm).
       6. Meets BS EN 1990:2002, BS EN 1991-1-1:2002 & BS EN 1995-1-1:2004.
       7. Minimum Power Supply Requirement:
          1. Per Switch Panel (3 Actuators): 24 V / 6 A.
          2. Control Unit: 120 V / 6 A.
    2. Performance Surface:
       1. Vinyl Performance Surface: Harlequin Cascade, Thickness: 0.080 inch (2 mm).
       2. Vinyl Performance Surface: Harlequin Fiesta, Thickness: 0.080 inch (2 mm).
       3. Vinyl Performance Surface: Harlequin Standfast, Thickness: 0.100 inch (2.6 mm).
       4. Vinyl Performance Surface: Harlequin Studio, Thickness: 0.120 inch (3 mm).
       5. Vinyl Performance Surface: Harlequin Studio B, Thickness: 0.120 inch (3 mm).
       6. Composite Surface: Harlequin RockSure, Thickness: .25 inch (6mm)
       7. Oil Tempered Hardboard (painted black).
  1. HARLEQUIN FLEXITY SPRUNG FLOOR SYSTEM
     1. System: For permanent or semi-permanent installation. Panels are laid in brickwork fashion onto the sub-floor, so cross joins do not coincide. Panels join together with a tongue and groove, which are glued for permanent installations or fixed using woodscrews at predetermined points for a semi-permanent solution. Finished by choosing an appropriate vinyl or engineered hardwood performance floor surface.
        1. Product: Harlequin Flexity Sprung Floor System by American Harlequin Corporation.
     2. Performance:
        1. Uniform Distribution Load: Greater than 208 lb per sq ft (10 kN per sq m).
        2. Point Load: Greater than 809 lbs (3599 N).
        3. Rolling Load: Greater than 337.2 lbs (1500 N).
        4. Average Shock Absorption: 67 percent.
        5. Vertical Deformation: 0.15 inches (3.9 mm).
        6. Area Deflection: 12.80 percent.
        7. Testing Standards: BS EN 14904:2006, BS EN 1991-1-1:2002.
        8. Fire Rating: Bfls 1 to EN 13501.
        9. Weight per Panel: 68 lbs.
        10. Overall Thickness: 1-1/2 inch (38 mm) nominal.
            1. With Vinyl Surface: 1-5/8 inch (41 mm) nominal.
     3. Performance Surface:

\*\* NOTE TO SPECIFIER \*\* Delete performance surfaces not required. Note the hardwood option is a special order. Contact the Manufacturer for more detailed information.

* + - 1. Harlequin Engineered Hardwood Performance Surface.
      2. Vinyl Performance Surface: Harlequin Cascade. Thickness: 0.080 inch (2 mm).
      3. Vinyl Performance Surface: Harlequin Fiesta. Thickness: 0.080 inch (2 mm).
      4. Vinyl Performance Surface: Harlequin Freestyle. Thickness: 0.180 inch (4.5 mm).
      5. Vinyl Performance Surface: Harlequin Hi-Shine. Thickness: 0.060 inches (1.5 mm).
      6. Vinyl Performance Surface: Harlequin Marine. Thickness: 0.080 inch (2 mm).
      7. Vinyl Performance Surface: Harlequin Reversible. Thickness: 0.050 inch (1.3 mm).
      8. Vinyl Performance Surface: Harlequin Reversible Pro. Thickness: 0.060 inch (1.5 mm).
      9. Vinyl Performance Surface: Harlequin Standfast. Thickness: 0.100 inch (2.6 mm).
      10. Vinyl Performance Surface: Harlequin Studio. Thickness: 0.120 inch (3 mm).
      11. Vinyl Performance Surface: Harlequin Studio B. Thickness: 0.120 inch (3 mm).
    1. Panels: Birch plywood stained black.
       1. Floor Panel: 88 x 48 inches (2235 x 1219 mm
       2. Dance Surface Size: 42 x 87 inches (1067 x 2210 mm
       3. Thickness: 1-1/2 inches (38 mm).
    2. Vibration Isolation: Dual density shock dampening elastomer pads at predetermined intervals.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.

\*\* NOTE TO SPECIFIER \*\* Traditional coverings including thermoplastic, linoleum and ceramic tiles need not be removed from existing sub floors. Delete provisions for wood and concrete floors not applicable.

* + - 1. The Contractor shall provide a concrete slab smooth and level to a tolerance of 1/8 inch (3.2 mm) in a 10 ft (3 m) radius. High areas shall be ground down and low areas filled with appropriate leveling compounds.
      2. Concrete sub floors shall be cured and dry to industry standards. They shall have an adequate moisture barrier beneath and at the perimeter of the slab.
      3. Wood sub floors shall be structurally sound, and level. Loose boards and nails shall be secured and gaps filled.
    1. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
  1. PREPARATION
     1. Clean surfaces thoroughly prior to installation.
     2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
  2. INSTALLATION
     1. Install in accordance with manufacturer's instructions.
        1. Flooring shall be stored on the premises for 24 to 48 hours before installation commences, or as required for acclimation. The flooring installer will make final determination of acclimation period.
  3. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION