

MADSEN RS1 AND RS2 RETRACTABLE STAGE SPECIFICATIONS

PART 1 GENERAL

1.1 Description

A. Scope

1. Retractable Stage – surface mounted or recessed retractable platform stage system. The platform shall be constructed of an aluminum modular substructure to receive 5/8” thick plywood. Stage shall be complete with heavy duty electrically operated winching mechanism controlled by a key operated safety switch and concealed limit switches. Retractable Stage shall automatically and positively lock in the extended position without the use of floor locks. Stage to be complete with hardwood skirt board and detachable, portable safety-tred steps with handrails.

B. Manufacturer’s Design Criteria

1. The structures are designed to the following loads, in addition to the self weight of the assembly:
 - A vertical live load of 100 lbs./sq.ft. (4.8 Kpa) over the platform area with a vertical live load of 120 lbs. per linear ft. (1.75 kN/m for each linear metre), or a concentrated load of 500 lbs. (2.2 kN).
2. The design is in accordance with the building code and therein listed relevant standards. These include the following:
 - a) CAN/CSA S16.1-94 Limit States Design of Steel Structures
 - b) CAN/CSA S136-94 Cold Formed Structural Steel Members
 - c) CSA 086.1-94 Engineered Design in Wood
 - d) CAN3-S157-M83 Strength Design in Aluminum
 - e) W59-M1989 Welded Steel Construction
 - f) W59-M1991 Welded Aluminum Construction
 - g) All welding to be done by a CWB/AWB certified shop.

C. Related Work

1. Final floor finishes to be commercial quality as specified. Supplied and installed by others.
2. Electrical power and hook up to all stage components provided by an electrician licensed within the area.
3. Typically, wall through bolts are supply only and are to be installed by masonry contractor during wall construction.

1.2 Quality Assurance

- A. Acceptable Manufacturer
 1. The manufacturer shall be a firm with at least ten years experience in the manufacturing of retractable stages.
 2. The manufacturer shall assume responsibility for the design of the retractable stage specified in accordance with the applicable regulatory requirements.
 3. The manufacturer shall ensure that the stage is structurally sound and that component parts and assemblies are capable of supporting super-imposed loads without deflection detrimental to function, appearance and safety.
- B. Acceptable Installer
 1. Installers to be recognized and certified by the Retractable Stage manufacturer.

1.3 Submittals

- A. Submit required number of copies of each of the following:
 1. Manufacturer's shop drawings
 2. Manufacturer's standard 1 year warranty
 3. Manufacturer's Operation and Maintenance instructions
- B. Submit material finish samples, as required.

1.4 Warranty

Submit manufacturers standard warranty form for Retractable Stage.

1. The manufacturer shall guarantee all work performed under these specifications to be free from defects for a period of one (1) full year.
2. The guarantee shall be limited to the fair use of the Retractable Stage and shall not include acts of vandalism, fire, flood or other situations that do not fall into the general use requirements of the stage.
3. A yearly inspection and required maintenance is recommended.

PART 2 PRODUCT

2.1 Manufacturers

1. The basis of design for the Retractable Stage detailed in these specifications is by Sheridan Gymnasium Equipment Limited
2. Model: Madsen RS-1 Surface Mount or Madsen RS-2 Recessed.
3. Operation: Electric winch assembly with minimum 208v 3ph $\frac{3}{4}$ hp instant reverse motor, magnetic starter, overload protection device, spring loaded key switch, and three limit switches.
4. Product Requirements: Standard size is 12' x 20'. Custom sizes are also available to suit the client's needs.
5. Accessories: 1 set of moveable stairs with handrails on both sides.

2.2 Fabrication

1. Fabricate Retractable Stage in accordance with reviewed, accepted, shop drawings.
2. Vertical steel columns shall be structural steel tubing.
3. Provide 5" x 1 $\frac{1}{2}$ " non-marking urethane wheels and non-marking adjustable rubber bumpers.
4. Provide Auto-Loc safety device. The fully automatic device will bring the stage to an immediate stop. The breaking mechanism is activated by both inertia (quick jerk) and/or centrifugal force (a faster than normal speed).
5. Provision shall be made for stage to automatically and positively lock in the extended position without the use of floor locks.
6. Each rolling frame will be permanently coupled to its adjacent frame which insures positive engagement and alignment of vertical frames.
7. Provide minimum 5/8" thick G1S plywood sub floor, fastened to sub frame with countersunk screws, with hardwood nosing on exposed edges.
8. Provide solid, premium grade, white maple skirt board along front of stage. Fabric skirt board is also available.
8. Provide paint grade plywood, primed and painted, for vertical shroud around stage, complete with support framing and hardwood corner trim. Provide removable panel at center, top for access to motor.
9. Provide electric winch assembly - 208v, 3ph, $\frac{3}{4}$ hp, instant reverse motor, magnetic starter, overload protection, flush-mounted key switch and three safety limit switches.

PART 3 EXECUTION

3.1 General

- A. Manufacturer's representative or Retractable Stage installer shall demonstrate the proper method of operation of the stage to the Owner and Architect upon completion of the work.
- B. Retractable Stage Subcontractor shall verify that all areas are free of impediments interfering with the installation and that substrates are acceptable to receive the stage in accordance with the manufacturer's recommendations.
- C. Electrical wiring within the building as required for power operation of the stage shall be provided by others.

3.2 Installation

- A. Retractable Stage shall be installed in accordance with the manufacturer's instructions and final shop drawings.
- B. Adjustment and Cleaning: Upon completion of installation, Retractable Stage Subcontractor shall adjust assembly to operate in compliance with manufacturer's recommendations. Retractable Stage Subcontractor shall clean installed stage on exposed or semi-exposed surfaces.
- C. The manufacturer reserves the right to incorporate design changes and material substitutions as it sees fit to improve the overall product.