

# SSS Clean Tread™ Installation Instructions

**KADEE**  
INDUSTRIES, INC.

## Model: KD98

INSTALLATION INSTRUCTIONS - STAINLESS STEEL GRATING  
AND FRAMES

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The installation of grating with an aluminum or stainless frame is relatively simple. However, attention to detail can make the difference between a firm, well-installed grating, or one that appears loose, spongy, and could rattle.

### **UNCRATING UNITS**

1. Check all grating crates/boxes per packing slip and shop drawing:
  - Correct number of units and frames (if applicable).
  - Hardware package (if applicable).
2. Check all merchandise for damage (*If damaged, report freight claim immediately- DO NOT REMOVE FROM CRATE until adjuster verifies – and contact factory*).
3. Grating panels will be nested to their corresponding frame (if applicable).

### **INSTALLATION OF FRAMES** *If no frames were provided skip to "Installation of Grating"*

The installation of the frame is a simple operation. However, care must be taken to avoid warping and/or bending of the steel angles or aluminum extrusions.

1. Review the Section Details in the enclosed shop drawings to determine the appropriate recess depth required. The recessed floor may be sloped, but the framing must be shimmed level.
2. Remove the grating panel from the framing (loosen any locking devices with the Allen wrench supplied, if applicable).
  - Depending on the size, the units may consist of more than one frame section.
  - When removing the grating panels from their frames, grating may appear to be warped. This is normal and will be corrected with the installation of the locking devices.
  - **NOTE: Because the grating panels were fabricated to fit each specific frame section, each panel must be installed into the same frame section in which it was shipped. Not doing this will result in improper installation.**
  - By following the markings on each frame section, fasten the frame sections together with the hardware provided. *If "knock-down perimeter frames" are supplied, skip this step.*
3. Grouting straps (if applicable): For aluminum frames, install 4" grouting straps into the threaded channel located on the outside of the frame (the channel located on the underside of the frame may be used also) on 2' centers. The grouting straps for stainless steel frames are welded to the underside of the perimeter angles. Bend straps as needed.
4. Ensure the frames are adequately blocked.
  - This will prevent the pressure of wet concrete or grouting cement from pushing in the sides of the frame.

- Because the grating and frame tolerances are  $-1/8"$ ,  $+0$ , warping of  $1/4"$  could cause misfit or misalignment of the lockdowns and tapped holes for the lockdown bolts
5. Place frame into opening and shim as required, allowing for a co-planer installation between the grating and the *finished* floor surface.
  6. Pour in grouting cement around edges and into center of frame to form the recess floor
    - Be sure to keep the top of the perimeter frame free of the cement.
  7. Before cement is set, confirm dimensions per the enclosed drawings. After cement is hardened, fastening the frame to the recess floor via the welded tabs at the intermediate support intersections is recommended.
  8. After the cement has hardened, an insert (such as plywood) should be placed in the opening to protect the frame edges.

### **INSTALLATION OF THE GRATING with Kadee Hidden lockdown spring clips**

#### **For Drilled and Tapped supplied Frame:**

1. Lay grating panel(s) into frame and align all lockdowns to the threaded channels (aluminum frame) or the tapped holes (stainless steel frame) in the perimeter frame and the intermediates.
2. For multi-panel units, be sure the panels are laid out in the proper configuration (as shown on the enclosed drawing). The panels are marked accordingly.
3. Using the Allen Wrench provided, tighten firmly, but not completely.
  - At the completion of tightening the last lockdown, repeat the procedure (much like tightening the lug nuts on a tire). This will remove any slack or warping caused by uneven initial tightening.
  - With multiple panel units, variance within the "on center" parameters may cause some surface wires and support rods not to align with adjacent panels.
  - If the floor of the recess is flat and level and the top of the tie bars are flush with the recess floor, then the grating will fit tightly onto the recess floor with minimal rattling or deflection.
4. After installation, inspect the grating regularly to ensure that all the lockdown bolts are tight, and the grating is level (co-planer with adjoining floor) and obstruction-free. Refer to Kadee Maintenance Instructions included in this packet.

#### **For Level Bed installation (no frame, or knock down perimeter frame installations), or for customer supplied pit framing:**

1. Lay the panels into the opening, per the configuration shown on the enclosed drawings.
2. At the lockdown locations, mark the spots in the recess floor where the lead anchors will be set or where the existing frame will be drilled and tapped. We recommend dipping the end of a wire hanger in paint, sliding it through the top surface wires and through the slot in the lockdown saddle clip. (*see alternate procedure below*).
3. Remove the grating panels. Drill the holes into the concrete and set the lead anchors (we recommend using an epoxy to ensure that anchors do not slip when fastening the lockdowns). If there is an existing frame, tap the holes at this time, using a 10-24 spiral point tap.
4. Place the grating back into the opening in the same positions.
5. Using the allen wrench provided, screw the lockdown bolts into the lead anchors (or tapped

holes). Although the lockdowns provide some movement of the bolts, you may have to adjust the panel location slightly in order to have them all align. **DO NOT TIGHTEN DOWN** the lockdown screws until all of the panels have their lockdown screws in place, and all panels are adjusted to each other.

*Alternate frame drilling installation procedure (in lieu of removing panels):*

1. At the lockdown locations, gently spread the wires apart. A flat-head screwdriver may be used, however **USE CAUTION TO AVOID DAMAGING THE WIRES.**
2. Using an 11/64" drill bit (5/32" if frame is aluminum), push the lockdown and centering clip to one side of the saddle clip. Drill a hole into the frame (through the saddle clip) using a slow speed, with good pressure. **CAUTION:** To prevent the drill chuck from gouging the surface wires, we recommend sliding a 1/4" flat washer over the drill bit before drilling (this will prevent the drill head from accidentally hitting the surface wires).

**Optional welded slotted tab lockdowns:**

If your grating is supplied with optional welded slotted tab lockdowns, please note the following: Install the anchor bolts into slotted tabs using some transparent tape to hold the bolts in the tabs. This will prevent the bolts from falling out when placing grating into the opening.

**Optional Visual Lockdown Assemblies:**

If your grating is supplied with optional Visual Lockdowns, please note the following:

The "lockdown block" is welded into the grating, and cannot be moved. The "lockdown bolt" is a 5/16-18 SS Socket Screw, requiring a 1/4" allen wrench. The installation procedure is similar to the instructions shown for the Hidden Lockdown assembly.

If you need to drill and tap your own holes in your jobsite provided framing, we suggest using the following process:

- 1) Position your grating in place
- 2) Selecting one lockdown, drill a pilot hole using the lockdown block as a guide. Use a 23/64" MT55-14542 JL Drill Bit
- 3) Then, drill a clear hole thru this pilot hole using a 17/64" MT15-13228 Cobalt SML Bit
- 4) Next, tap this hole with a 5/16-18 Morse Tin Shear Tap

You should now bolt this one lockdown loosely, for the purpose of securing the panel so it will not move. After confirming you panel has not moved, secure another lockdown relatively opposite to the one just completed. *The grating must be secured so as not to move during this process.* Once this 2<sup>nd</sup> lockdown is installed loosely, you can then proceed to drill, tap, and install all of the other lockdown screws. After all screws are loosely installed, you can then tighten all the screws in a manner similar to tightening the lug nuts on a tire: alternating to opposing lockdown screws evenly until all screws are tight,

**USE ALL OF THE LOCKDOWNS PROVIDED.**