BEFORE YOU BEGIN...

Read and understand these instructions before beginning a ramp setup.

Use caution and care for your back when lifting, pushing, pulling, folding or unfolding your SICO® ramp system. Never lift more than you are able to safely handle.

SICO’s® ramp system is designed to comply with ADA requirements, including a maximum slope not exceeding 1” [25 mm] of elevation change per foot [30.5 cm] of horizontal distance traveled. The ramp system can be connected to any SICO® portable stage.

TOOLS REQUIRED:

- T-Handle 8 mm [5/16"] hex wrench – provided.
- 8 mm or 5/16” socket or box end or open end wrench.
- 17 mm socket or box end or open end wrench.
- 5 mm hex driver.
- Optional: Drill with 8 mm (5/16”) socket and hex driver.
- T-Handle: 3 mm provided with turnaround kit.

If you have any problems or questions during setup, contact SICO® Customer Care at 1-800-424-0796.
INTRODUCTION:

SICO's® ramp system is a modular system that is designed to connect to any SICO® portable stage. Modules are available with either 6” [15.2 cm] or 8” [20.3 cm] height increments up to 72” [183 cm] high to match the height or the range of heights of your SICO® portable stage. The ramp system includes the ramp surface, handrails and all hardware that is required.

A typical ramp system consists of:

- A 0”-6” [0-15.2 cm] or a 0”-8” [0-20.3 cm] wedge section;
- A 72-3/8” [184 cm] or 96-3/8” [245 cm] bridge section;
- One or more 72-3/8” [184 cm] or 96-3/8” [245 cm] folding leg sections;
- Right hand and left hand handrails for each ramp section;
- An upper clamp for connecting the top ramp section to the stage or ramp landing;
- Optional caddy for storing the ramp system and for transporting the ramp system between the storage location and the stage location.

ADA requires that ramp runs be no more than 30 feet [9.14m] long, so ramps higher than 30” [76cm] will require one or more ramp landings or turnarounds. Space considerations may require turnarounds on lower ramp systems. Each landing or turnaround requires additional guardrails, an upper and a lower clamp assembly and may require enter and exit handles, and a handrail U-turn.

A typical ramp turnaround, where direction of travel changes by 180 degrees, consists of two 3’x8’ [0.9m x 2.4m] folding leg platforms, but could be a single 6’x8’ [1.8m x 2.4m] SICO® 1800 Series or Tri-Height portable stage. A typical ramp landing, where direction of travel does not change, could consist of any 4’x8’ [1.2m x 2.4m] SICO® portable stage. If a ramp landing is at the same height as the main stage and is different from the main stage, a landing to stage connector will be required. Note that a 60” [152 cm] turning circle is required when there is a change in the direction of travel.
WHEN HANDLING YOUR RAMP, REMEMBER TO:

1. Use two people to safely move and handle the ramp sections.

2. To prevent injury, be careful to not drop ramp sections. Damage to the ramp may also occur.

3. When setting up a ramp systems, always start at the top end and work section by section toward the bottom wedge section.

4. When taking a ramp system down, start at the bottom (i.e., wedge) section.

5. Do not attempt to move ramp sections after they are connected to the stage or other ramp sections.
Detailed instructions begin on the next page.

1. Plan the layout of the portable stages and the ramp system.

2. Set up the stage system. See the instructions supplied with the stage.

3. If there is a top landing, set up the top landing and install the landing to stage connector, if required.

4. Attach the upper clamp assembly to the landing or stage.

5. Connect the tallest ramp section to the upper clamp assembly. Note the legs of the folding leg ramp sections are toward the bottom of the ramp section. Connect additional ramp sections as required by the ramp layout.

6. If a ramp landing or turnaround is included in the layout, set up the landing or turnaround, attach a lower clamp assembly to the landing or turnaround and connect the landing or platform to the bottom end of the ramp section.

7. Repeat steps 4 through 6 as required for the ramp layout.

8. When only the bridge section and wedge section are left to install, position the wedge section and then connect the bridge section between the wedge section and the lowest folding leg section.

9. Install handrails and guardrails.
PLAN THE RAMP LAYOUT

The flexibility designed into your SICO® ramp system makes it possible to set the ramp system up in many different configurations, particularly the longer ramp systems.

If you need assistance with designing a ramp configuration for your site, please contact your SICO® sales representative or SICO’s® Customer Care Department (see contact information on last page). A few examples are illustrated here.

1. Straight ramp system that connects to a ramp landing or directly to a stage section without any changes in the direction of travel. This option is limited to a maximum ramp height of 30” [76 cm] per ADA requirements. (See layout 1)

2. A ramp with a turnaround. The upper end of the uppermost run may connect to a SICO® ramp landing or a SICO® portable stage unit. (See layout 2)

3. Ramp systems more than 60” [152 cm] high must have at least two landings or turnarounds. (See layout 3)

Note that turns in the opposite direction to what is shown can be set up with the same equipment.
TOP LANDING INSTRUCTIONS

1. If the ramp will connect directly to the stage without a separate landing, skip this section and proceed to attaching the upper clamp assembly.

2. If the top landing is the same type of stage as the main stage units, set up the landing unit and connect it to the main stage units with the stage unit to unit connectors; skip the rest of this section and proceed to attaching the upper clamp assembly.

3. If the top landing is a different type of stage than the main stage units, a landing to stage connector is required. The width of this connector must match the width of the landing edge that connects to the main stage units.

4. Place the connector firmly against the stage edge at the desired location. Using the provided T-handle hex wrench, tighten the socket head cap screws for the two clamps directed toward the main stage unit. Firm pressure is needed to ensure the connector is solidly attached to the stage. Do not over tighten to prevent damage to the stage.

5. Position the landing firmly against the connector and tighten the screws for the two clamps directed toward the landing.
The upper clamp assembly provides a secure attachment of the upper end of the highest ramp section.

To attach the upper clamp assembly:

1. Place the upper clamp assembly against the edge of the stage or ramp landing with the top tubular member firmly against the stage or landing.

2. Using the provided T-handle hex wrench, tighten the two socket head cap screws on the top of the clamp assembly. Firm pressure is needed to ensure the clamp is solidly attached. Do not over tighten to prevent damage to the stage or landing.

3. Disengage the two hitch pins from the holes in the clamp assembly.
ATTACH THE FIRST RAMP SECTION

Note: Use the optional SICO® caddies to save time and effort.

1. Move the loaded ramp caddy to near where the ramp section will be set up. Lock the caddy casters to keep the caddy from moving while unloading the ramp sections.

2. Ramps with three or more sections will have at least one section with folding legs. The ramp section with the longest legs is the first section to install.

3. With the ramp section on the caddy, release the leg brace locking pins by rotating the two yellow handles until the handles are perpendicular to the legs. See Figure 1.

4. Partially extend the legs as shown in Figure 2.

5. Rotate the yellow handles to their original position.

6. Swing the legs fully out until both locking pins engage in the leg braces.

7. While holding the ramp section in place, lift the lock on the caddy to release the deck. See Figure 3.

8. Rotate the deck until one of the legs contacts the floor.

9. With one person at each end of the ramp section, pivot the ramp off the caddy so that it rests on its legs and the upper attachment brackets. See Figure 4.
10. With a person on each side of the ramp, lift the upper end of the ramp (i.e., the end without the legs) so that it is slightly higher than the stage or landing to which it will connect.

11. Pull the ramp section toward the upper clamp until the ramp section brackets are against the flat plates of the upper clamp assembly.

12. Lower the ramp onto the support plate.

13. Secure the ramp in place using the hitch pins that are part of the upper clamp assembly.

14. If the ramp is on an uneven floor, adjust the glides to level the ramp as needed.

**ATTACHING THE NEXT RAMP SECTION**

1. If the next section is a ramp section with folding legs (i.e., not a landing or turnaround or the bridge ramp section or wedge ramp section), connect the second ramp section to the bottom end of the first ramp section the same way the first ramp section was attached to the upper clamp.

2. Repeat this process until the next piece of the ramp system is either the bridge section or a landing or a turnaround.

3. If the next section of the ramp system is the bridge section, skip the next section on turnarounds and landings.
TURNAROUNDS AND LANDINGS

Landings and turnarounds are ADA requirements for longer ramps systems. They are also used to change the direction of travel as required to fit within the building’s dimensions; see the section on planning the ramp layout.

1. Set up the stage unit(s) that will function as the landing or turnaround at the desired height. Refer to the operating manual provided with that product for additional information regarding that product. If two 3’ x 8’ [0.91 x 2.44m] folding leg units serve as the turnaround, connect them to each other with the rotolocks.

2. Attach the lower clamp assembly to the edge of the landing or turnaround where the upper ramps sections will connect; the clamp attaches the same way the upper clamp was installed.

3. Attach an upper clamp assembly to the edge of the landing or turnaround in the location where the lower ramp sections will connect to the landing or turnaround.

4. Move the landing or turnaround so the lower clamp assembly is adjacent to the bottom edge of the ramp section that has already been set up.

5. If necessary, adjust the glides in the landing or turnaround and the ramp section until the heights match.
6. Lift the landing or turnaround slightly as you slide it toward the bottom edge of the ramp section and engage the lower clamp assembly onto the bottom end of the ramp section.

7. Attach the next ramp section to the landing or turnaround in the same manner as the earlier ramp sections were installed.

8. Install additional ramp sections as required until another landing or turnaround is reached or until the next section is the bridge section. If the next part of the ramp system is a landing or turnaround, repeat the steps in this section. If the next section is the bridge section, proceed to the next section.
The bottom two sections of the ramp are the bridge section and the wedge section.

1. Tilt the bridge section off the ramp caddy so the bridge section is resting on all four connector brackets that are mounted near the four corners. See Figure 1.

2. Lift one edge of the bridge section and insert the two brackets into the brackets on the bottom edge of the lowest folding leg ramp section or the upper clamp of a landing or turnaround. See Figure 2.

3. Place the wedge ramp section adjacent to the bottom edge of the bridge ramp section. Remove the hitch pins from the holes in the wedge section connector brackets. See Figure 3.

4. With one person on each side, lift the low end of the bridge section while pulling the wedge section toward the bridge section until the bridge section brackets contact the vertical plates of the wedge section and the lower the bridge section brackets into the wedge section brackets. See Figure 4.

5. Secure all four corners of the bridge section by installing the hitch pins. See Figure 5.
The connector at the upper end of the wedge ramp section is designed to connect to the lower end of the bridge ramp section. When the wedge ramp section connects to a stage or landing or turnaround, two special connectors (part number 118309B) are required to connect the wedge ramp section to an upper clamp assembly.

1. Pin the square tube end of both of the special connectors to the wedge ramp section assembly using the hitch pins.

2. Push the wedge ramp section with the special connectors attached against the upper clamp assembly.

3. Secure the special connectors now attached to the wedge ramp section to the upper clamp assembly with the hitch pins.
ATTACHING GUARDRAILS

IMPORTANT: Guardrails and handrails are critical safety features of any ramp and stage. Handrails on the SICO Series 2 ramps also serve to lock the ramp sections together, essentially creating one integral ramp system.

WARNING
ALWAYS install guardrails and connect handrails of adjacent guardrails to provide a continuous handrail and to prevent ramp sections from separating from each other. Failure to do so may result in serious injury or death.

WARNING
Use only metric 10mm bolts to connect the guardrails to the decks. 3/8"-16 bolts will engage the threads of the metric nut but may strip out under load resulting in injury or death.

**Contact SICO® Customer Care** for replacement parts if the provided bolts are lost or damaged.

Ramp handrails/guardrails come in right hand and left hand versions. When installed correctly on the ramp, the posts will be vertical.

1. Lay out the handrails and guardrails next to where they will be installed.

2. It is typically easiest to start from the top of the ramp and work your way down, usually with the Inside rails first.
3. Place the first handrail on the ramp surface with the handrail toward the center of the ramp section. Note that the posts should be vertical; if they are not, use that guardrail on the opposite side of the ramp.

4. Align the holes in the guardrail mounting plates with the holes in the top of the ramp.

5. Attach the guardrail to the ramp using two flat washers and two M10-1.5 x 110mm [4.33"] socket head screws; there are M10-1.5 nuts on the underside of the ramp deck.

6. Using the 8mm [5/16"] T-handle hex wrench provided, tighten the two screws enough to keep the handrail standing vertically. It will be easier to connect other handrails and/or guardrails if the screws are not tight. They will be tightened later.

7. If there is another ramp section before coming to a landing or the wedge section, install a 5" [13cm] long straight locating sleeve in the bottom end of the handrail tube. Insert half of the locating sleeve into the handrail tube, and install a self-tapping screw to secure the sleeve to the handrail. A drill with an 8 mm (5/16") hex driver recommended. The locating sleeve normally does not need to be disassembled when the ramp is taken down.

8. Place the handrail for the next section of ramp on the ramp surface. Align the upper end of the handrail with the locating sleeve and push the handrail so the handrail engages the locating sleeve. Then, align the holes in the guardrail mounting plates with the holes in the deck, install two flat washers and two M10-2x110mm screws and tighten just enough so the guardrail stands reasonably straight.
9. Repeat steps 7 & 8 until you get either to a landing or the wedge section.

10. Repeat steps 3 through 9 for the opposite side of the ramp and for the other runs of ramp until you get to the wedge (bottom) ramp section.

11. If the wedge ramp section is not connected to the bridge section, skip this step. Otherwise, install locating sleeves into the bottom end left hand and right hand handrails that are mounted on the bridge section as directed in step 7 above.

12. Position one of the bottom ramp guardrails on the ramp and engage the upper end of its handrail with the locating sleeve.

13. Attach the upper end of the guardrail to the ramp wedge section with a flat washer and an M10-1.5x60mm [2.36"] socket head screw.

14. Insert a 10mm carriage bolt (see picture) into the slot at the bottom edge of the ramp with the thread end facing up. Set the guardrail mounting plate hole over the carriage bolt and install a flat washer and 10mm nut. It may be necessary to lift up slightly on the guardrail for the slot at the bottom edge of the wedge ramp section to capture the square neck of the carriage bolt during the initial tightening.

15. Repeat steps 12 through 14 for the other bottom guardrail.

16. If the ramp system has a turnaround with a 180 degree direction change, install a handrail U-turn piece between the two adjacent handrails. Attached an angled sleeve to the bottom end of the handrail with a self-drilling screw, making certain that the end of the angled sleeve is horizontal. Attach an angled sleeve to the upper handrail, again making certain that the end of the angled sleeve is horizontal. Install the ends of the U-turn over the two angled sleeve. Secure by tightening the two setscrews using the 3 mm T-handle hex wrench.
17. If the ramp system has landings or turnarounds with guardrails with integral handrails, insert an angled locating sleeve into the end of the handrail of the ramp guardrail, and attach it with a self-drilling screw. Engage the handrail of the landing guardrail with the angled locating sleeve. Attach the landing guardrail to the landing with two flat washers and two M10-1.5x60mm [2.36"] screws and tighten just enough so the guardrail stands reasonably straight.

18. Repeat step 17 for the other landing and turnaround guardrails with integral handrails.

19. Tighten all of the guardrail mounting screws. All of the guardrails with integral handrails should now be securely fastened.

20. Install the other landing guardrails per the instructions included with them. All edges of the ramp and the landings should now have guardrails installed and securely fastened.

21. Install enter handles on the two ramp guardrails installed on the wedge (bottom) ramp section. Enter handles have the locating sleeve angled upwards. Insert the locating sleeve into the end of the handrail. Secure the bottom end to the guardrail post with an M10x1.5x60mm [2.33"] hex head screw, leaving it a bit loose for now. Secure the top end to the handrail with a self-drilling screw. Then tighten the hex head screw.

22. Install another enter handle on the other bottom guardrail.

23. If required, install enter handles on the bottom ends of ramp guardrails that terminate at a landing or turnaround.

24. Install exit handles at the top end of ramp guardrails. These are similar to the enter handles except the locating sleeve is angled down.
DISSASSEMBLING THE RAMP

Disassembly of the ramp is basically the reverse of the assembly procedure, starting with the guardrails at the bottom end of the ramp. Enter and exit handles do not need to be removed. The carriage bolts at the bottom end of the bottom guardrails just have to be loosened and can stay with the guardrails.

The locating sleeves between guardrails do not need to be removed. Loosen the two setscrews on the handrail U-turn and remove the U-turn. As each handrail and guardrail is removed, be sure to install the attachment hardware to the ramp or platform so that it is available the next time the ramp is set up.

Put the handrails and guardrails on the optional caddy.

After the guardrails are removed and stored, start disassembly of the ramp from the bottom wedge section. As each ramp and landing section is disconnected from the rest of the ramp system, install it onto the optional caddy.
Notes:

Please have the serial number of the product when contacting customer service.

To receive assistance for:
- Selecting replacement parts / decals
- Repairing the product
- Adjusting and operating the product
- Obtaining on-line assistance

TELEPHONE: 1-800-424-0796
FAX: (952) 829-5141
WEB SITE: WWW.SICOINC.COM

SICO AMERICA INC.
7525 Cahill Road
Minneapolis, MN 55439 USA