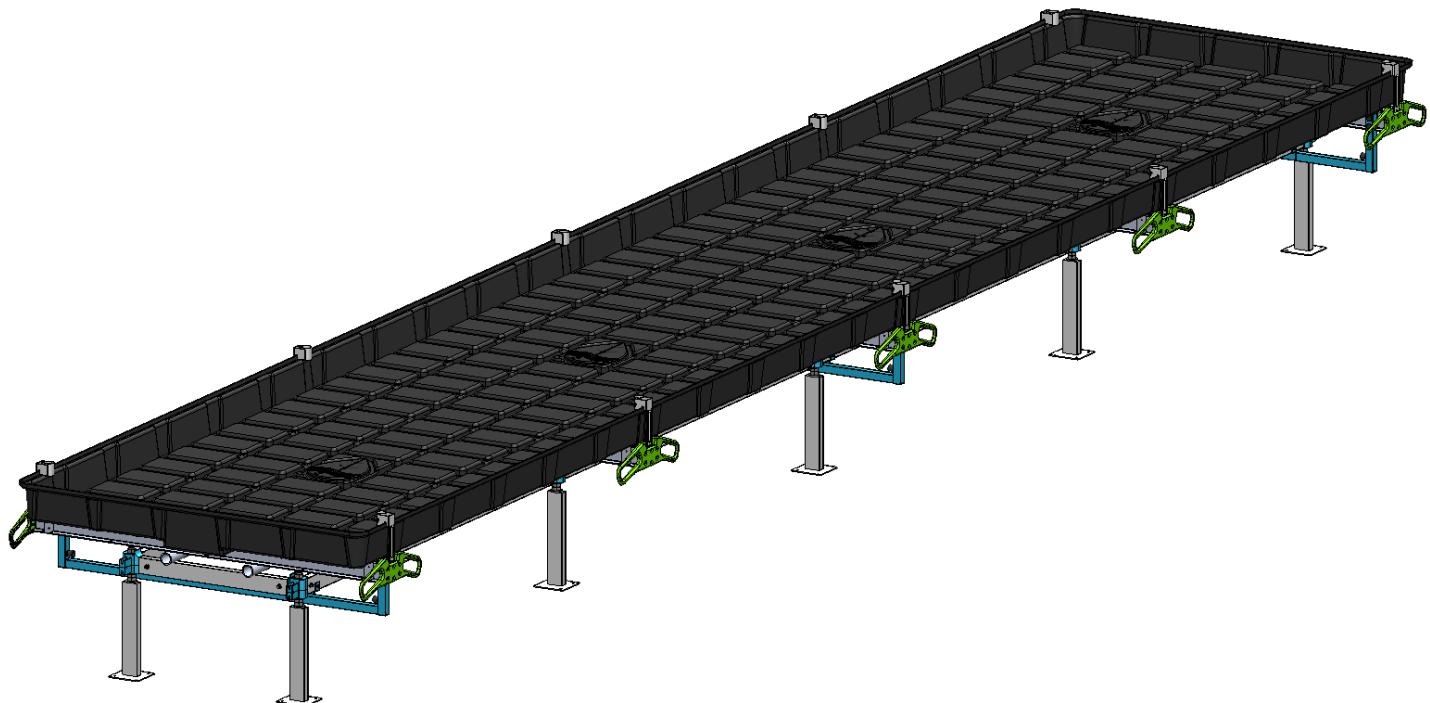




BOTANICARE®

Slide Bench Assembly Instructions



Important Safety Precautions

Read and follow all warnings and instructions before using Slide Bench. Failure to heed direction could lead to serious personal injury, damage to the Botanicare® Slide Bench, or property damage.

- The Slide Bench must always be placed on and anchored to a concrete surface that is level and void of any large cracks. Failure to do so could result in the bench tipping over unexpectedly.
- Do not load the Slide Bench with more than 25 pounds per square foot.
- Do not climb **on** or **in** the Slide Bench or Trays.
- All steps in this assembly procedure must be completed prior to using the bench.
- Keep fingers and hands away from the rollers. The table rollers can cause injury.
- Keep fingers and hands away from the anti-tip brackets. Do not use the brackets to move the bench. Fingers or hands can be caught between the bracket and the frame causing injury.
- Do not extend threaded shafts more than the maximum spacing defined.
- Do not drill anchors into post tension slabs.

Before using BOND THREE Lap Tray Sealant Adhesive, carefully read and follow all warnings and directions for use, on package and in instructions.

Introduction

Before You Get Started

Please take the time to read all the assembly instructions before attempting to assemble your Botanicare® Slide Bench.

NOTE: The following tools & supplies are required to complete this assembly of the slide bench.

• 15/16" Combination Wrench	• 15/16" Socket & Wrench
• 3/8" Combination Wrench	• 3/8" Socket & Wrench
• 5/16" Combination Wrench	• 5/16" Socket & Wrench
• Cordless Drill with clutch	• 3/8" Nut Driver Drill Bit
• Hammer Drill	• 5/16" Nut Driver Drill Bit
• Tape Measure	• 6" Nut Driver Extension
• String Line or Layout Laser	• #17 Drill Bit
• Chalk Line	• ¼" Masonry Drill Bit
• Level	• Rubbing Alcohol
• Hammer or Mallet	• Clean Cloth Rags
• C-Clamps or Bar Clamps	• Caulk Gun
	• 1 3/8" Step Drill Bit

User Provided Hardware

Installation of the bench systems will require ¼" x 2¼" wedge style concrete anchors. Installation of the anchors should follow the anchor manufacturer's recommendations.

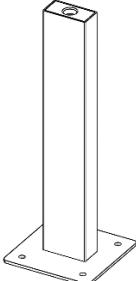
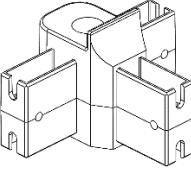
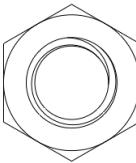
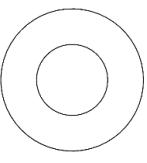
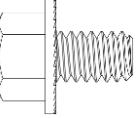
Setting the Drill Clutch

CAUTION: Overtightening screws using a cordless drill can result in stripping the threads.

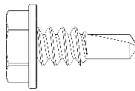
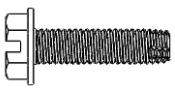
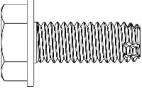
Use the lowest setting on the drill clutch when installing thread-cutting screws. Slowly increase the torque on the clutch until screw head makes contact with the bench surface. Once the screw head is in contact with the surface, do not continue to drill with a larger torque setting. Use an appropriate size socket wrench and hand tighten the screw.

NOTE: There is a repair kit available should a screw strip out a hole.

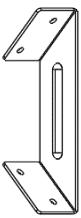
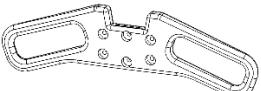
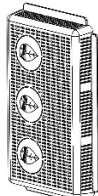
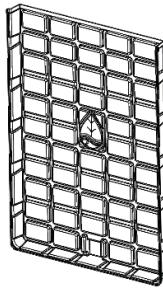
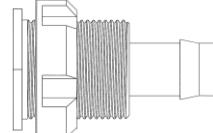
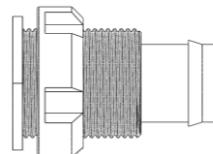
Arch Kit

(A) - Frame Leg (2)	(B) - Arch Tube (1)	(C) - Frame Connector (2)	(D) - Threaded Rod (2)
			
5/8"-11 Hex Nut (4) 	5/8" Flat Washer (4) 	1/4"-20 x 3/8" Flanged Hex Head Screw (4) 	

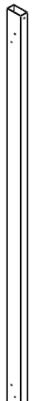
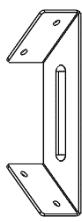
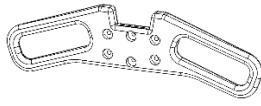
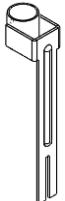
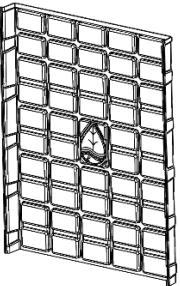
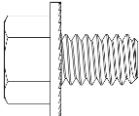
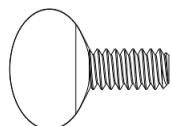
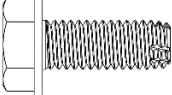
Anti-Tip Kit

(O) - Anti-Tip Frame (1) 	(P) - Guide Bracket (1) 	(Q) - Roller Spacer (1) 	(R) - Bump Stop (2) 	(S) - 1" Square Tube Cap (4) 
(T) - 5/8" Hole Plug (4) 	#10-16 x 1/2" Self-Drilling Screw (2) 	#10-32 x 1" Thread Cutting Hex Head Screw (4) 	#10-32 x 1/2" Thread Cutting Hex Head Screw (2) 	

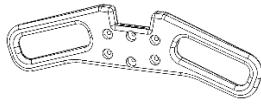
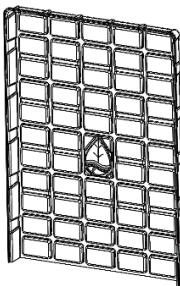
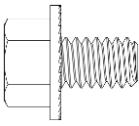
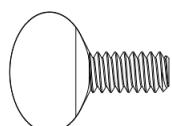
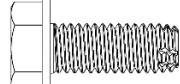
Drain Kit

(E-1) - Frame Tube Long (2)	(F) - Table Extrusion (1)	(G-1) - Table Tube Long (3)	(H-1) - Roller Tube Long (2)	(I-1) - Roller Connector (2)
				
(J) - Corner Bracket (8)	(K) - Handle (2)	(L) - Trellis Bracket (2)	(M) - Drain Screen	(N-1) - Drain Tray
				
¼"-20 x 3/8" Flanged Hex Head Screw (8)	#10-24 x 1/2" Thumb Screw (2)	#10-32 x 1" Thread Cutting Hex Head Screw (12)	#10-32 x 1/2" Thread Cutting Hex Head Screw (46)	¾" Bulk Head  Or 1" Bulk Head 
Arch Kit (1)		Anti-Tip Kit (1)		

Middle Kit

(E-1) - Frame Tube Long (2)	(F) - Table Extrusion (1)	(G-1) - Table Tube Long (3)	(H-1) - Roller Tube Long (2)	(I-1) - Roller Connector (2)
				
(J) - Table Bracket (8)	(K) - Handle (2)	(L) - Trellis Bracket (2)	(N-2) - Middle Tray	
				
¼"-20 x 3/8" Flanged Hex Head Screw (8)	#10-24 x 1/2" Thumb Screw (2)	#10-32 x 1" Thread Cutting Hex Head Screw (12)	#10-32 x 1/2" Thread Cutting Hex Head Screw (46)	
				
Arch Kit (1)				

End Kit

(E-2) - Frame Tube Short (2) 	(F) - Table Extrusion (2) 	(G-2) - Table Tube Short (3) 	(H-2) - Roller Tube Short (2) 	(I-2) - Roller Ends (4) 
(J) - Table Bracket (8) 	(K) - Handle (4) 	(L) - Trellis Bracket (4) 	(N-3) - End Tray 	
$\frac{1}{4}$ "-20 x 3/8" Flanged Hex Head Screw (8) 	#10-24 x 1/2" Thumb Screw (4) 	#10-32 x 1" Thread Cutting Hex Head Screw (24) 	#10-32 x 1/2" Thread Cutting Hex Head Screw (46) 	
Arch Kit (2)		Anti-Tip Kit (1)		

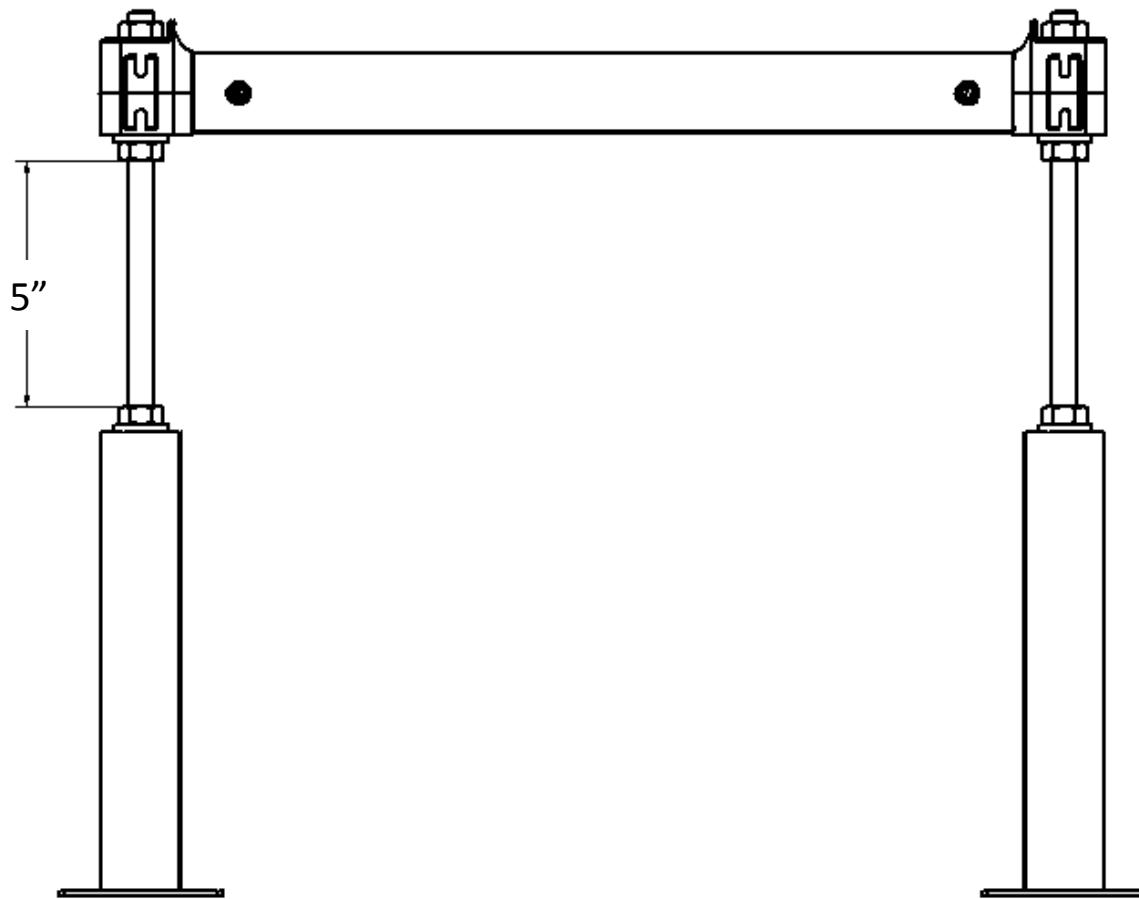
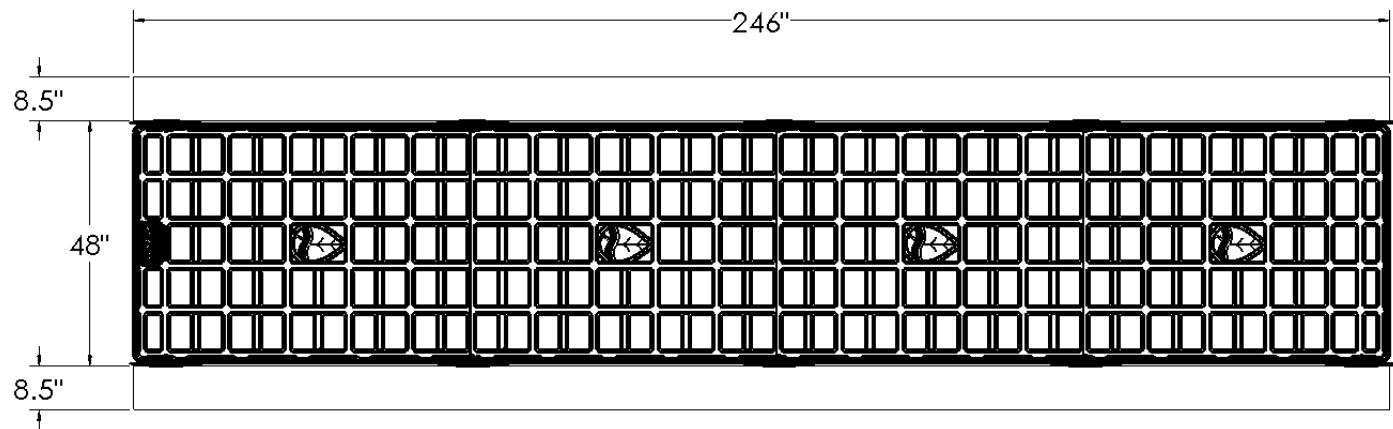
(S) – BOND THREE (Adhesive)

(T) – Thread Locker

Basic Bench Dimensions

As an example, a 20 foot bench is 48 inches wide by 246 inches long. The bench table top allows for plus or minus 8.5 inches of travel (or movement) side to side, measured from the center position, or 17 inches total travel from the left stop to the right stop.

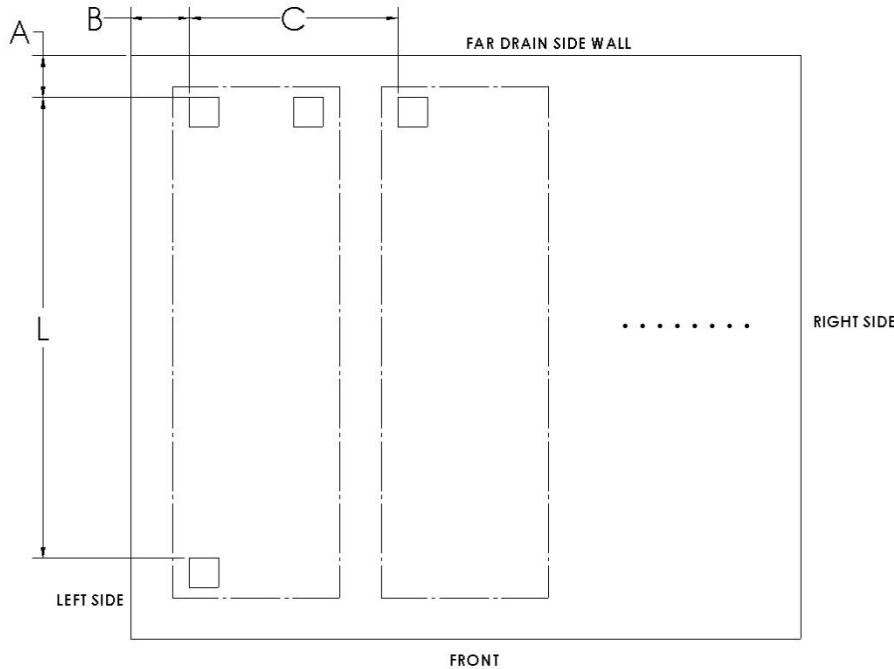
Maximum Bench Rod Spacing



Multi-Bench Room Layout

Use the room layout tool to determine quantity, position, and spacing of the benches as well as the desired aisle widths around the benches in the room.

Room Orientation



1. Far drain side wall distance to leg mounting plate of arch 1.

$$A = \text{Desired drain end tray spacing to the wall} + 5 \frac{1}{8}''$$

2. Left side wall distance to leg mounting plate of arch 1

$$B = \text{Desired Left side minimum aisle width} + 19 \frac{1}{4}''$$

3. Distance "L" from leg mounting plate of arch 1 to the last arch (bench length dependent)

BENCH LENGTH	L
15'	174"
20'	234"
25'	294"
30'	354"
35'	414"
40'	474"

4. Distance between benches

$$C = \text{Desired Aisle Width} + 31''$$

Layout the first bench and apply marks to the floor as indicated above.

Assemble the first bench with Steps 1 to 3.

Once the first bench is assembled, apply marks to the floor for the next bench.

Assemble the next bench with Steps 1 to 3.

Repeat as necessary for the total number of benches that will be installed in the room.

Bench Assembly Instructions

Step 1

Arch Assembly

Parts:

(A) Frame Leg (2)	(B) Arch Tube (1)
(C) Frame Connector (2)	(D) Threaded Rod (2)

Hardware:

5/8"-11 Hex Nut (4)	5/8" Flat Washer (4)
1/4"-20 x 3/8" Hex Head Screw (4)	

Tools:

15/16" & 3/8" Socket & Wrench
15/16" & 3/8" Combination Wrench

Note: Start with the arch that will be the closest to the drain end of the frame.

- 1-1 Install a nut and then a washer onto the long end of threaded rod (**D**). Insert threaded rod (**D**) in the leg (**A**).
- 1-2 Insert a flat washer onto the short end of the threaded rod (**D**) and the frame connector (**C**) on top of the washer. Install a nut onto the threaded rod (**D**) to capture the frame connector (**C**). Do not tighten at this time.
- 1-3 Repeat 1-1 and 1-2 for second leg.
- 1-4 Install the arch tube (**B**) onto the middle post of the assembled frame connector (**C**). Secure with screws.
- 1-5 Table 1-1 shows the required distance between the nuts to achieve a 1% grade for the number of arches. Make any necessary adjustments.
- 1-6 Repeat Step 1, arch assembly sequence, for the number of arches desired.

TIP: Number each arch to keep track during the frame assembly in Step 2.

Do not tighten hex nuts at this time.

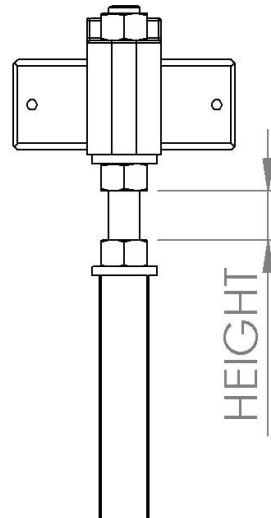
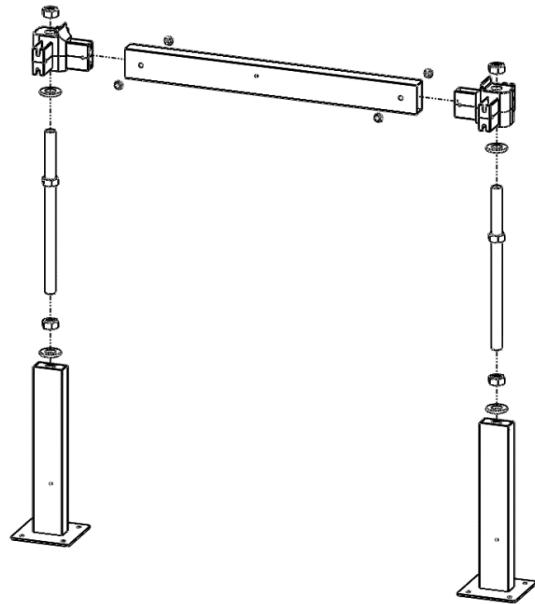


Table 1-1		
For 1% Grade		
Arch Number	Bench Length Position	Height Spacing
Drain 1	0'	0"
2	5'	5/8"
3	10'	1'-1/4"
4	15'	1'-7/8"
5	20'	2'-1/2"
6	25'	3'-1/8"
7	30'	3'-3/4"
8	35'	4'-3/8"
9	39' 6"	4'-15/16"

Step 2

Frame Assembly

Parts:

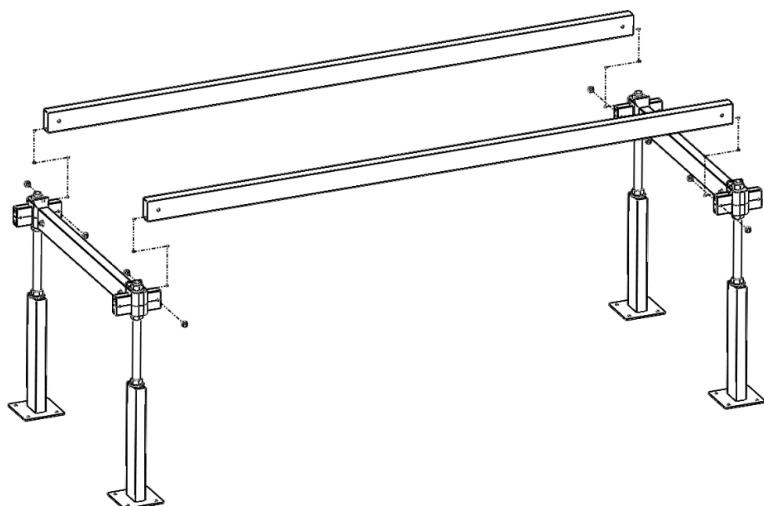
(Step 1) Assembled Arches (2)
(E-1) Frame Tube Long (2)
(E-2) Frame Tube Short (2)

Hardware:

1/4"-20 x 3/8" Hex Head Screw (TBD)
--

Tools:

3/8" Socket & Wrench
3/8" Combination Wrench



NOTE: Assemble the frame in roughly the final position that it is to be installed in the room.

NOTE: Start with the end of the bench where the drain will be located. This will be Arch 1 from Table 1-1 of the group assembled in Step 1.

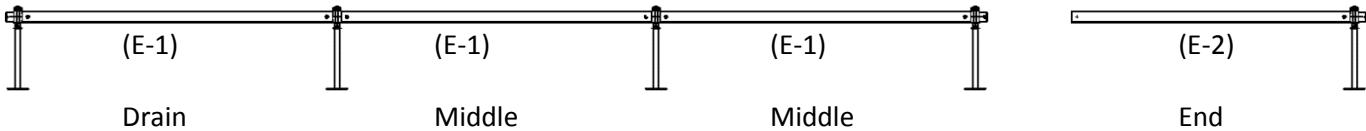
2-1 Stand an assembled arch from Step 1 upright. Starting with the drain end, insert a long frame tube (**E-1**) onto the frame connectors (**C**) of one arch.

2-2 Secure with screws.

2-3 Stand the next assembled arch upright. Insert the opposite end of both long frame tubes (**E-1**) onto the frame connectors (**C**) of the second arch. Secure with screws.

2-4 Repeat the process until you reach the final arch.

2-5 Use the short frame tubes (**E-2**) to connect the last arch as shown in the following image.



Step 3

Position and Anchor Frame

Parts:

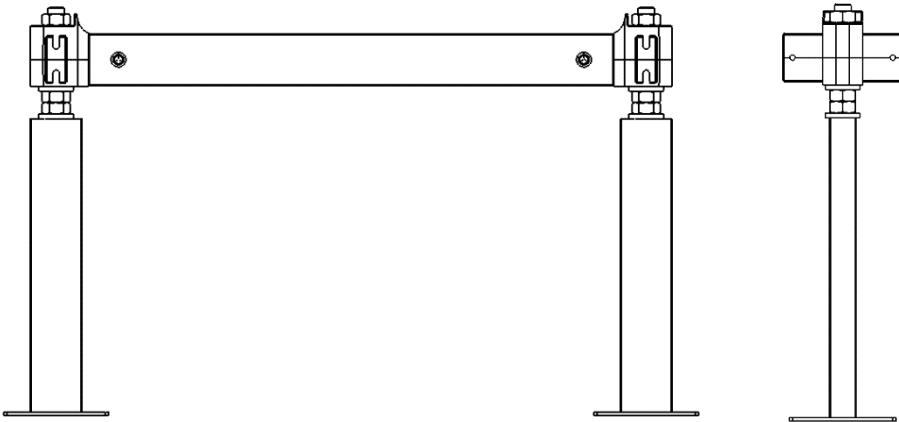
(Step 2) Assembled Frame

Hardware:

Concrete Wedge Anchors, $\frac{1}{4}$ " x $2\frac{1}{4}$ "

Tools:

Hammer Drill
$\frac{1}{4}$ " Masonry Bit
Socket Wrench
Box Wrench
Hammer or Mallet



3-1 Using the layout marks from the room layout procedure, snap a chalk line from the first arch alignment mark to the edge of the last arch alignment mark.

3-2 Position the frame so that the chalk line aligns with the edge of the leg mounting plates.

3-3 Verify that the legs are oriented properly (shown in the image above). Finger tighten the hex nuts on each threaded rod to keep the legs from rotating.

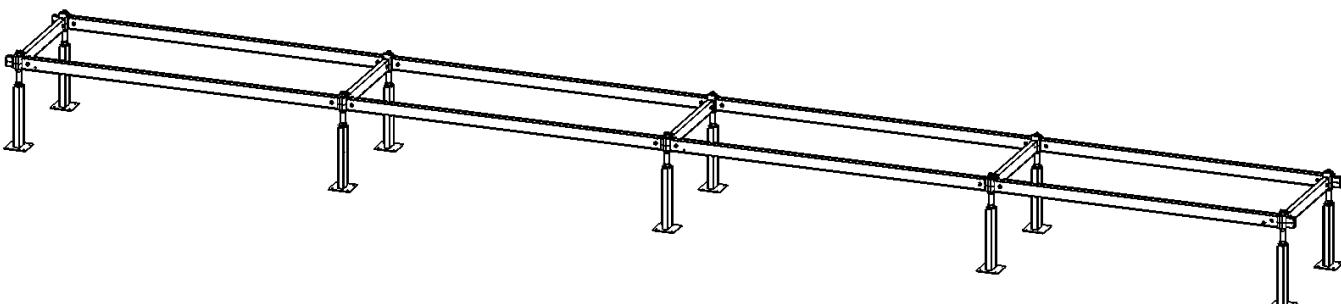
Note: Follow anchor manufacturer's instructions to properly drill and install anchors.

3-4 Use a hammer drill to drill into the floor through the holes in each foot plate.

3-5 Install and tighten all anchor hardware.

CAUTION: All leg mounting locations must have the anchors installed and properly tightened to prevent damage to the bench or a failure of a component that could lead to injury to personnel.

CAUTION: Do not drill anchors into post tension slabs.



Step 4

Final Adjust Frame for Required Slope

Parts:

None

Hardware:

None

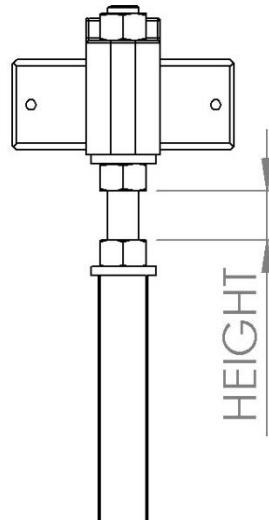
Tools:

15/16" Socket & Wrench

15/16" Combination Wrench

Tape Measure

String Line or Layout Laser



This step will make final adjustments to the slope along the length of the bench, and to the level from side to side. If the bench is not level side to side, the table will want to roll to the low side.

NOTE: The system's performance may be affected if the arches are not level and the slope is not consistent.

4-1 Verify that each arch is set to the desired height. Use Table 4-1 below.

4-2 Verify each arch is level from left to right. Make any necessary adjustments to achieve level.

4-3 Finally tighten the nuts on top of the frame connector (**C**) and at the leg location to secure the frame.

TIP: Set up the first and last arch and tie a string line between them so that the string is taut. Use this as a reference line and adjust the height of the other arches so that they barely touch the string.

Table 4-1		
For 1% Grade		
Arch Number	Bench Length Position	Height Spacing
Drain 1	0'	0"
2	5'	5/8"
3	10'	1'-1/4"
4	15'	1'-7/8"
5	20'	2'-1/2"
6	25'	3'-1/8"
7	30'	3'-3/4"
8	35'	4'-3/8"
9	39' 6"	4'-15/16"

Step 5

Assembly of the Roller Tubes

Parts:

(H-1) Long Roller Tube (2)	(H-2) Short Roller Tube (2)
(I-1) Roller Connector (2)	(I-2) Roller End (4)

Hardware:

#10-32 x 1/2" Thread Cutting Hex Head Screw

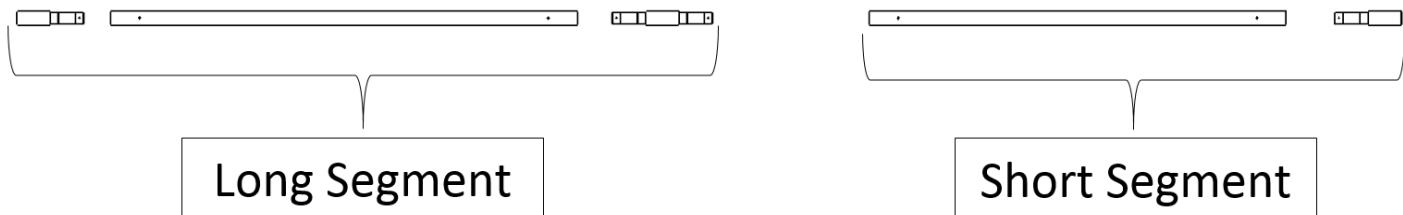
Tools:

5/16" Socket & Wrench
Cordless Drill
5/16" Nut Driver Drill Bit

CAUTION: Do not overtighten screws as this will cause the threads to strip out of the roller connectors.

- 5-1 At the drain end (**Arch 1**) place a roller connector (**I-1**) inside one end of a long roller tube (**H-1**). Align the holes in the roller connector (**I-1**) and the long roller tube (**H-1**). Install and tighten the screws.
- 5-2 Place a roller end (**I-2**) inside the other end of the first long roller tube (**H-1**). Align the holes in the roller end (**I-2**) and the tube (**H-1**). Install and tighten the screws.
- 5-3 Place the next long roller tube (**H-1**) on the roller connector (**I-1**). Align the holes in the roller connector (**I-1**) and the long tube (**H-1**). Install and tighten the screws.
- 5-4 Short roller tubes (**H-2**) will be the last tubes assembled with a roller end (**I-2**) inserted and screwed at the tallest arch. Repeat until a complete roller for one side of the bench is completed.
- 5-5 Repeat the steps for the second roller for the opposite side of the bench.
- 5-6 Roll each roller all the way to its appropriate side of the frame against the roller stop. This will provide for a stable base to assemble the table in the next step.

NOTE: Both roller ends are found in short tube box.



Step 6

Assembly of the Table

Parts:

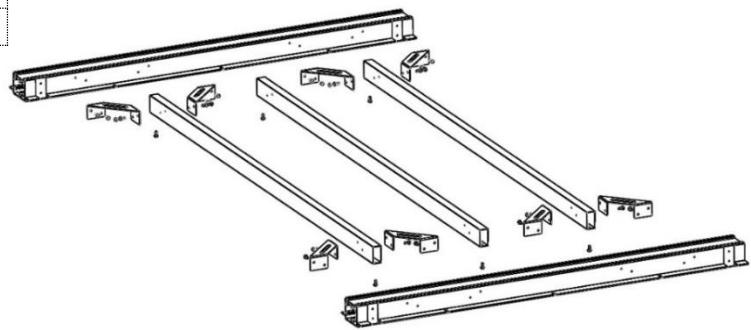
(F) Table Extrusion	(G-1) Table Tube Long (3)
(G-2) Table Tube Short (3)	(J) Table Bracket (8)

Hardware:

#10-32 x 1/2" Thread Cutting Hex Head Screw

Tools:

5/16" Socket & Wrench
Cordless Drill
5/16" Nut Driver Drill Bit
Tape Measure

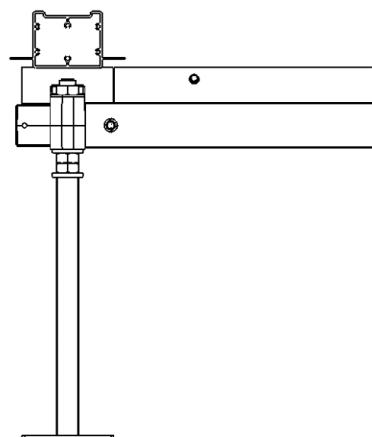


NOTE: Assemble the table top in 5 foot sections as you continue working down the length of the bench.

CAUTION: Do not overtighten screws as this will cause the threads to be stripped out of the aluminum extrusions.

- 6-1 Place a table extrusion (**F**) on top of the rollers at the first arch (see image below).
- 6-2 Place a second table extrusion (**F**) on top of the rollers at the next arch.
- 6-3 Partially install screws in the holes provided at the bottom of each end of the table tube (**G-1**).
- 6-4 Place a table tube (**G-1**) in the center on the ledge of the table extrusions (**F**) ensuring that the screws slide into the slots on the extrusion. Use a socket wrench to tighten screws.
- 6-5 Repeat 6-4 for the outer table tubes (**G-1**).
- 6-6 Install the corner brackets (**J**) between the outer table tube (**G-1**) and the table extrusion (**F**). Secure with screws. Do not tighten screws at this time.
- 6-7 Tighten all screws.
- 6-8 Repeat steps for each of the next 5 foot sections, and then finish with the short sections using the short table tubes (**G-2**).

CAUTION: The table is only resting on the rollers and if moved off center or if weight is placed on one side, it could tip off the rollers and frame, causing damage or injury.



Step 7

Assembly of the Anti-tip

Parts:

(O) - Anti-Tip Frame	(P) - Guide Bracket
(R) - Bump Stop	(S) - 1" Square Tube Cap
(T) - 5/8" Hole Plug	(V) - Thread Locker

Hardware:

#10-32 x ½" Thread Cutting Hex Head Screw
#10-32 x 1" Thread Cutting Hex Head Screw
#10-16 x ½" Self-Drilling Screw

Tools:

5/16" Socket & Wrench
Cordless Drill
5/16" Nut Driver Drill Bit
C-Clamps or Bar Clamps

7-1 Use the ½" long thread cutting screws to fasten the bump stops (**R**) to the anti-tip frame (**O**).

7-2 Place an anti-tip frame (**O**) on the inside of the table extrusion (**F**) on one end of the bench. Using a bar clamp or C-clamp, clamp in place.

7-3 Apply a drop of (**V**) thread locker to 1" long screw and insert screws through the anti-tip frame (**O**) and into the table extrusion (**F**).

7-4 Place a guide bracket (**P**) onto the bottom of the frame tubes so the holes are 2.5" from the frame connector, and the anti-tip frame (**O**) is captured between the arch and guide bracket (**P**). Clamp bracket in place.

7-5 Use the self-drilling screws to secure the bracket to the bench.

7-6 Repeat the process for the other anti-tip locations.

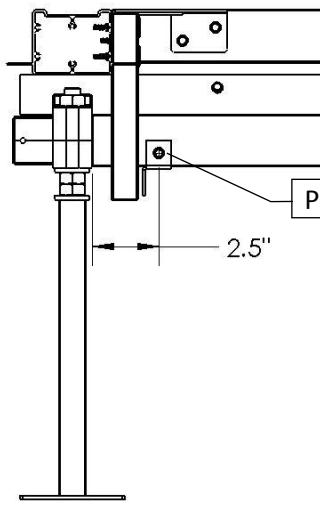
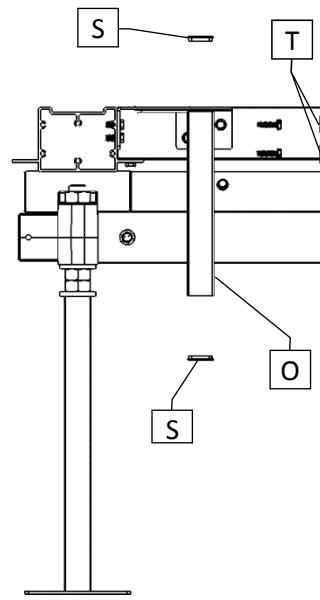
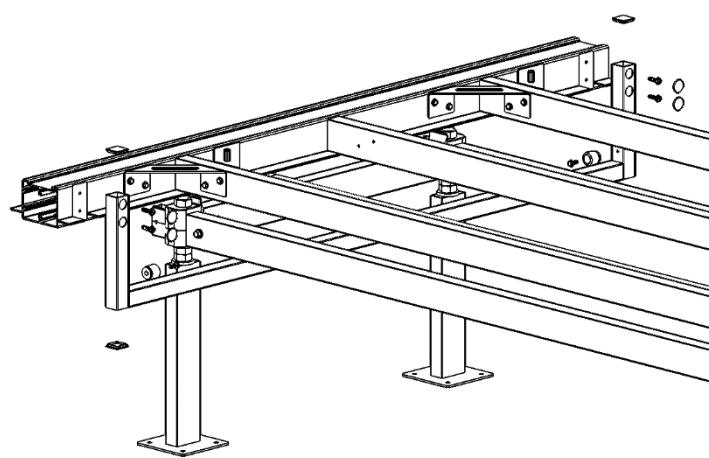
7-7 Anti-tips will be installed at each end and every other arch. Make sure each anti-tip is installed on the side of the extrusion facing towards the center of the bench. See table below.

7-8 Test the travel distance from side to side. Make any necessary adjustments.

Bench Length	Arch Number								
	1	2	3	4	5	6	7	8	9
10	x		x						
15	x			x					
20	x		x		x				
25	x		x		x	x			
30	x		x		x		x		
35	x		x		x		x	x	
40	x		x		x		x	x	

| = Represents the arch

X= Anti-tip location in relation to the arch (|)



Step 8

Installation of the Roller Spacers

Parts:

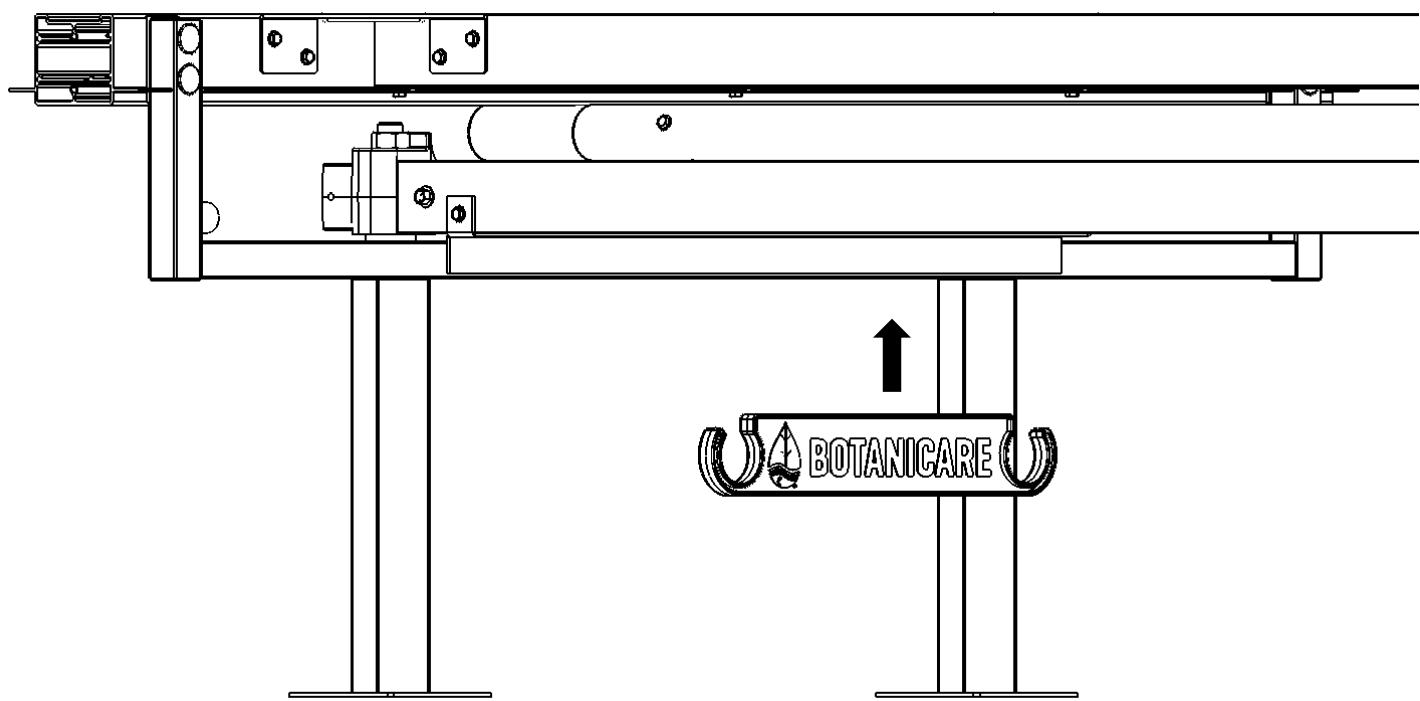
(Q) Roller Spacers

Hardware:

None

Tools:

None



8-1 Position the rollers approximately 11" apart.

8-2 Apply a spacer (**Q**) at each anti-tip location by pushing a spacer (**Q**) onto the rollers from below the bench.

Step 9

Assembly of Pull Handles

Parts:

(K) Handle

Hardware:

#10-32 x 1" Thread Cutting Hex Head Screw (6)

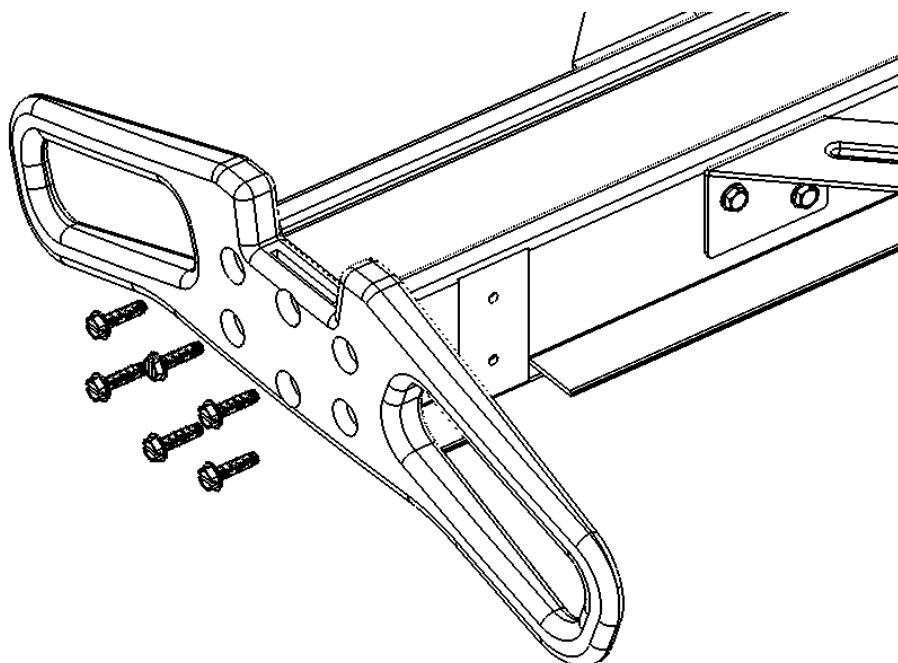
Tools:

5/16" Socket & Wrench

Cordless Drill

5/16" Nut Driver Drill Bit

- 9-1 Place a handle (K) at the end of each table extrusion (F) and align the holes.
- 9-2 Insert and tighten the screws in the 4 outer locations.
- 9-3 Partially insert a screw in the 2 center locations until the base of the head is flush with the outer surface of the handle. Do not tighten at this time.



Step 10

Assembly of the Trays

Parts:

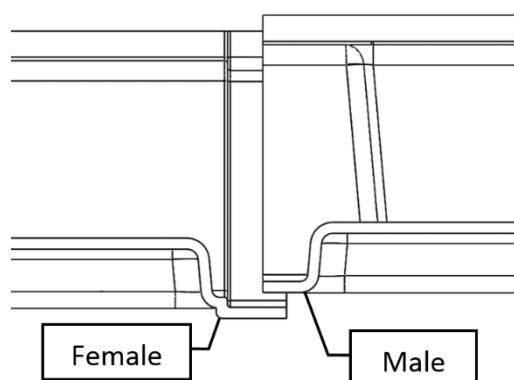
(M) Drain Screen (1)	(N-1) Drain Tray (1)
(N-2) Middle Tray	(N-3) End Tray (1)
(U) BOND THREE	

Supplies:

Rubbing Alcohol (70-90%)
Cleaning Rags

Tools:

Caulk Gun
1 3/8" Step Drill Bit



- 10-1** Locate and position the drain tray (**N-1**) on the drain end of the bench. Make sure seams sit in extrusion recess.
- 10-2** Prep the top of the female portion of the tray joint by cleaning with rubbing alcohol and allow to dry.
- 10-3** Locate the next tray segment, a middle tray (**N-2**), and prep the top and bottom of the male joint by cleaning with rubbing alcohol. Allow to dry.
- 10-4** Position the male end of the next tray segment 2 to 3 inches away from the female.
- 10-5** Using your caulking gun apply a 1/4" - 3/8" thick bead of BOND THREE (**U**) across the entire base and wall of the female portion of the joint. Apply the bead approximately in the middle of the joint.
- 10-6** Lay the male section of the tray over the female section of the tray and apply mild pressure across the full length of the seam.
- 10-7** Repeat steps 10-2 through 10-5 until the end tray (**N-3**) is installed.

CAUTION: Complete all tray adjustment within 15 minutes of applying sealant. Once sealant is applied and adjustments are made do not move or handle trays for 24 hours.

- 10-8** Using your caulk gun, apply sealant in the voids on the top surface of the seam.
- 10-9** Wipe smooth and level with damp sponge.
- 10-10** At the Drain Tray (**N-1**) using your 1 3/8" Step Drill Bit, drill and install 3/4" or 1" Bulk Head Fittings.
- 10-11** Install the Drain Screen (**M**) over the Bulk Head Fittings

Note: Use Botanicare® 3/4" Bulk Head for supply and 1" Bulk Head as drains.

Step 11

Assembly of Trellis Brackets

Parts:

(L) Trellis Brackets

Hardware:

#10-24 x 1/2" Thumb Screw

Tools:

5/16" Socket & Wrench

Cordless Drill

5/16" Nut Driver Drill Bit

- 9-1** After the tray sealant has cured for 24 hours, place a trellis bracket (L) in the slot of the handle (K).
- 9-2** Position the tray so that the seam is captured in the trellis bracket (L).
- 9-3** Tighten the 2 center screws to secure trellis bracket (L).
- 9-4** Partially install thumb screw. Tighten screw when setting up trellis.

