

# EXTERUS® Outdoor Kitchens

1

## FORSHAW



Quality since 1871

13200 Corporate Exchange Drive, Bridgeton MO 63044

www.exterusoutdoor.com • (800) 367-7429

### Installation and Maintenance Instructions

Welcome to the Forshaw family and thank you for your purchase of Exterus outdoor kitchen modules. This is a great product that will give you many years of enjoyment when properly installed and maintained.

CAUTION		
	<b>DO NOT DISCARD THIS MANUAL</b>	
<ul style="list-style-type: none"><li>• Important operating and maintenance instructions included.</li></ul>	<ul style="list-style-type: none"><li>• Read, understand and follow these instructions for safe installation and operation.</li></ul>	<ul style="list-style-type: none"><li>• Leave this manual with party responsible for use and operation.</li></ul>

#### **⚠ DANGER:**

##### **IF YOU SMELL GAS:**

1. Shut off the gas to the appliance.
2. Extinguish any open flame.
3. Open lid.
4. If odor continues, keep away from the appliance and *immediately* call your gas supplier or the fire department.

#### **⚠ WARNING:**

1. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
2. An LP cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

**⚠ WARNING:** If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or death.

- **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **What to do if you smell gas**
  - **DO NOT** try to light any appliance.
  - **DO NOT** touch any electrical switch. **DO NOT** use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

#### **⚠ WARNING:**

Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. For proper installation, refer to the installation instructions. For assistance or additional information, consult a qualified professional installer, service agency, or the gas supplier.



Installation and service of this product must be performed by qualified personnel. Forshaw suggests NFI certified professionals, or technicians supervised by an NFI certified professional

These instructions are a great resource, but this set of instructions is not intended to supersede any International Residential code, local codes and ordinances, ANSI Z.21, NFPA 54-2015, ANSI Z223.1-2015, or installation instructions of any appliances or ancillary building products. The installation must conform with local codes or, in the absence of local codes, with either the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1, or the Propane Storage and Handling Code, CSA B149.2

Building code and appliance installation instructions vary by region and by manufacturer, so it is your responsibility that your work is done correctly, safely, and to the correct specifications.

We attempt to collate helpful information, tips, and best practices. Due to the dynamic nature of this category, however, we accept no responsibility or liability from omission, error, or mistakes accuracy of the information contained herein.

### Safety Alert Key:

**DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury



**WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury



**CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury



**NOTICE:** Indicates practices which may cause damage to product or to property



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## READ AND UNDERSTAND BEFORE INSTALLING PRODUCT:

Before you (the qualified service technician) sell or install this product, you must learn technical requirements of the products you are selling or installing, and as such, you must understand the items below. This list is not exhaustive and is included as a convenience only:

### **DANGER**

You must check that the patio, deck, or pavers (“the substrate”) will support the total weight (mods, appliances, stone, countertop) of the kitchen. Too much weight can cause a deck to collapse and result in serious injury or death. An on-site construction or civil engineer can confirm weight limits and safety of your application.

### **WARNING**

You shall locate the kitchen outdoors, away from combustible materials or buildings, out from under a combustible roof, projection, or covering. Installing under a combustible roof, indoors, in a garage, in any enclosed area, or in any building is a fire hazard.

### **WARNING**

You must plan to add ventilation along the fuel line run inside the modules to allow fugitive gas to escape in the event of a gas leak. Gas buildup inside the modules is an explosion hazard.

### **WARNING**

Ensure vents will not be blocked in the installation. **If the factory-supplied vents will be blocked or are insufficient, it is your responsibility to cut new holes and install the vents to comply with the grill-manufacturer’s requirements and ANSI Z21.58-2015a section 4.6.** Removing or covering vents is an explosion hazard.

### **WARNING**

**Do not store an LP cylinder (or any other combustible substance, lighter fluid, gasoline, wood, etc.) in the Exerus modules.** Storing LP cylinders inside modules is an explosion hazard.

### **WARNING**

All construction materials (countertop, veneer, filler, etc) shall be non-combustible. Installation of combustible materials is a fire hazard.

### **WARNING**

If an external electrical source is utilized, the outdoor cooking gas appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, Part 1, CSA C22.1.

**⚠ WARNING**

Ensure that all manufacturer-specified clearances to combustible materials are met. You must not compromise manufacturer-specified clearances. Consult the installation manual for each appliance or accessory for clearance information. Installing appliances or accessories that do not meet clearance to combustible materials is a fire hazard.

**⚠ WARNING**

Check for damage. Do not install damaged components. If you have freight damage, claim with your freight carrier. Damage caused by letting products sit unprotected or unsupervised at the job site does not constitute freight damage. It is your responsibility to protect your merchandise at the job site. Installing damaged components can cause injury or property damage.

**⚠ CAUTION**

Exterus modules have sharp edges. Wear hand, arm, and eye protection while working with modules. Exterus modules are manufactured from sheet metal and have sharp edges.

**⚠ CAUTION**

You must determine the direction of prevailing wind and plan to orient the grill so that the wind is blowing from front to back over the grill. High wind environments are not good applications and can cause malfunctions and runaway grease fires. Grease fires will cause property damage or injury.

**⚠ CAUTION**

Install anti-tip hardware as required by the appliance manufacturer. Improperly installing cooking equipment without mounting brackets can cause injury or fire.

**NOTICE**

You must locate the kitchen away from pooling water, or plan to mitigate the pooling water before installation. Installing a concrete pad to support modules and affect drainage patterns.

**NOTICE**

Exterus modules shall not be installed in or on boats or other recreational vehicles (RVs).

**NOTICE**

Review that your module plan will fit into the space provided – don't install half the components to find that the rest of the pieces don't fit. Check that your cutouts match the appliances that were shipped. If you have something that does not agree, stop and ask for help. Do not install mismatched equipment.

## HOW TO INSTALL MODULES

- A. Lift and carry modules to the installation site. Most modules can be carried by two or three men and fit through pool gates, allowing for easy transportation. Make sure your path is clear of obstacles and lift components as a team (as shown in Figure 1).



Figure 1

**CAUTION** Lifting too much weight will cause injuries. Lift each component as a team. Do not exceed what each team member can carry. Use equipment (lifting straps, power lift gates, etc.) safely to assist the lift.

**NOTICE** Do not install onto fresh concrete or other corrosive materials – this will cause corrosion and damage to the structural integrity of the modules. .

**NOTICE** Show the crew the installation site and the approved path between the loading area and the installation area before beginning work. Landscaping can be damaged by heavy foot traffic

- B. Once all modules are at the installation site, dry fit all modules into the space to ensure that the modules will fit the desired application (as shown in Figures 2 & 3).

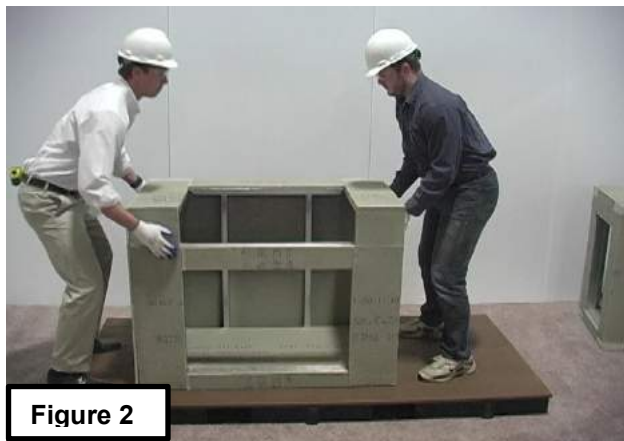


Figure 2



Figure 3



**⚠ DANGER** Do not block vents. Blocking vents can create an explosion hazard. You must add vents if factory vents are not sufficient or vents are blocked.



Figure 4

**Do not block vents.** Blocking vents will create an explosion hazard. **You must add more vents to comply with grill manufacturer specifications and ANSI Z21.58-2015a section 4.6 if:**

- factory vents (shown in Figure 4) are not sufficient
- Vents will be blocked by site conditions

Exerus modules include the following ventilation:

- 2 vents in rightmost module end panel with 25 in<sup>2</sup> of net free area each (50 in<sup>2</sup> total)
- 2 vents in leftmost module end panel with 25 in<sup>2</sup> of net free area each (50 in<sup>2</sup> total)
- 2 vents in grill module with 25 in<sup>2</sup> of net free area each (50 in<sup>2</sup> total)
- \*\*90 CB modules have 4 vents on exterior sides with 25 in<sup>2</sup> of net free area each (50 in<sup>2</sup> per side/ 100 in<sup>2</sup> total)\*\*

Each pair consists of one vent placed within 1.25" of the floor and within the 1.25" below the underside of the countertop. Both the placement and the size are key to having a safe installation, so you must not overlook this detail.

**These are a key safety component.**

C. Slide two modules together so that they are level, plumb, and square. Two qualified technicians should use a squaring tool and shims together to properly align the modules (as shown in Figures 5 & 6). Working as a team will ensure proper fit and prevent modules from shifting while they are being positioned.



Figure 5



Figure 6

**NOTICE**

Practice good workmanship and good judgement when lining up the modules. Do not allow more than 1/8" standoff between modules. Excessive tolerances will make finishing modules harder or impossible.

- D. As you align the modules, use shims underneath modules as needed (as shown in Figure 7). Many surfaces have a slight slope, so shimming modules will ensure a level cooking surface. Ensure that tall or long gaps are hard packed with filler.



Figure 7

### NOTICE

Do not leave modules unsupported. Ensure that long or tall gaps are hard packed with structural filler. Unsupported cantilevers will create stress on fasteners and can cause fastener failure which will cause the frame to collapse.

- E. Once the modules are correctly positioned, use two clamps to hold the modules together (as shown in Figure 8). Place clamps at the top and bottom of the vertical side panel tracks (as shown in Figure 9). One technician should hold the modules in square while the other clamps them together. Working as a team will prevent any shifting.

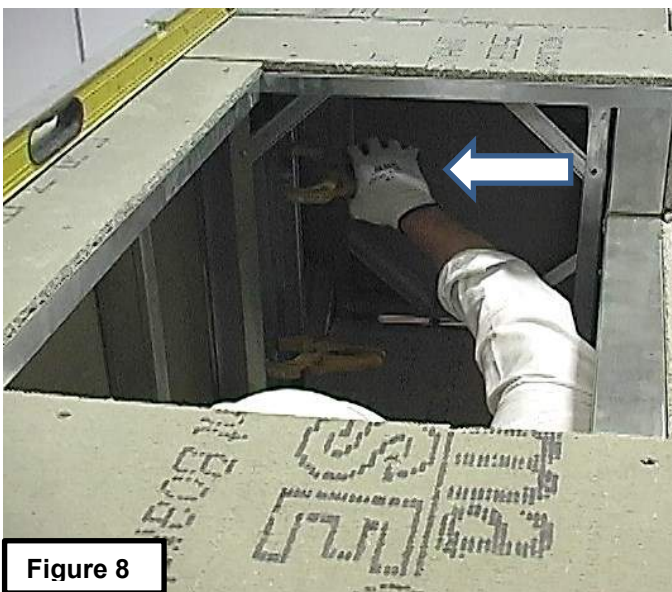


Figure 8

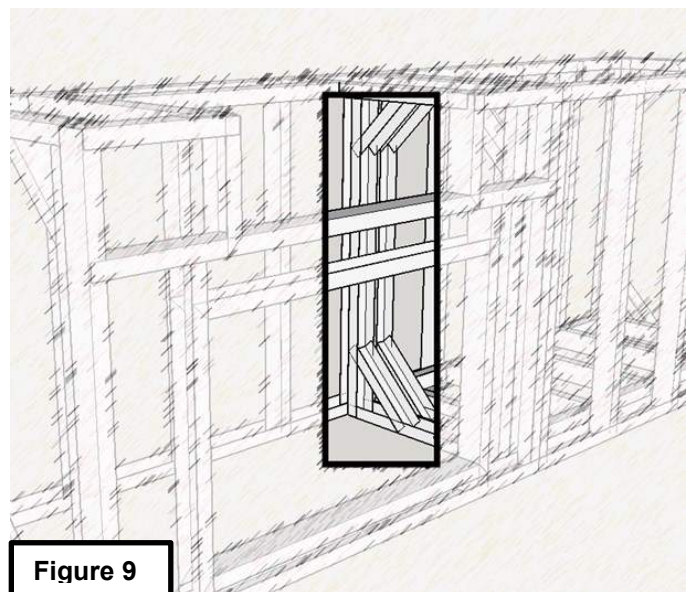
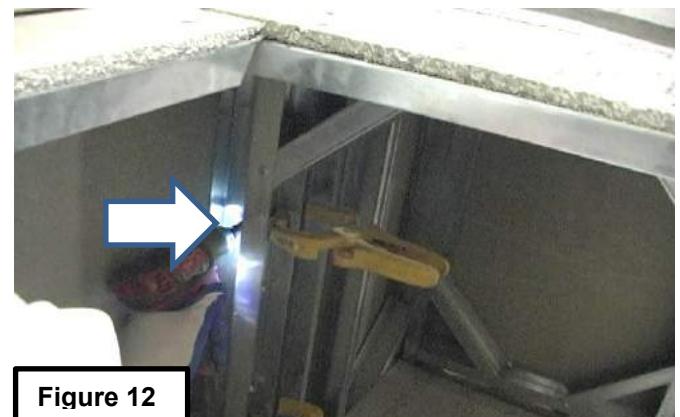
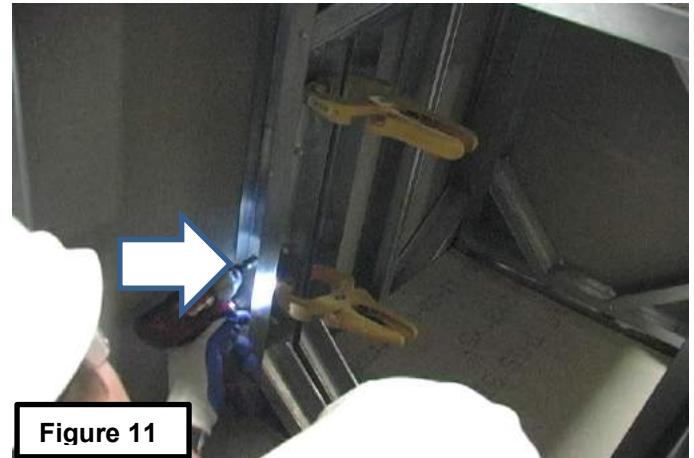
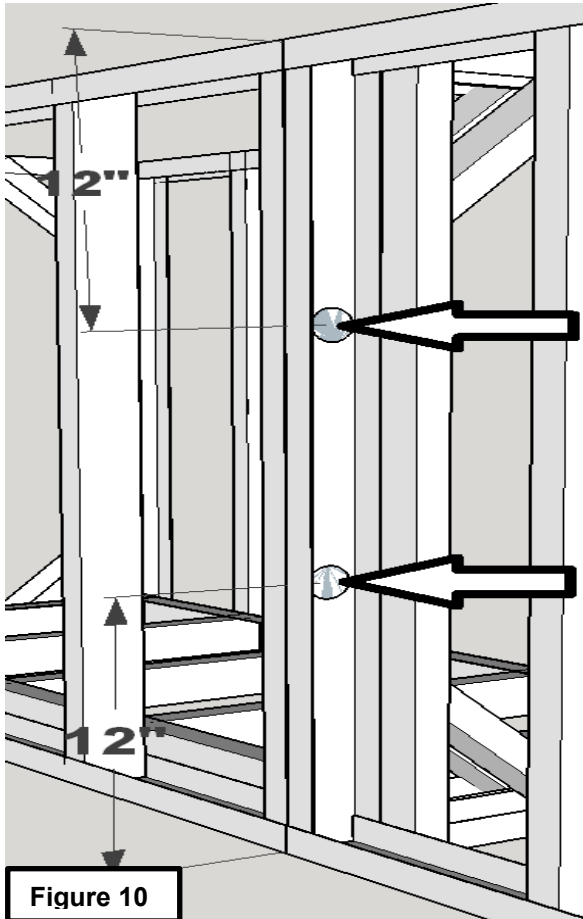


Figure 9

- F. Attach back uprights together with 2 screws. Use #10-12 HILTI  $\frac{3}{4}$ " metal to metal self-drilling galvanized HVAC screws (HILTI item #423253 or equivalent). Screws must have galvanized coating. Place bottom screw 12" from module bottom, and top screw 12" from module top (as shown in Figures 10-12).

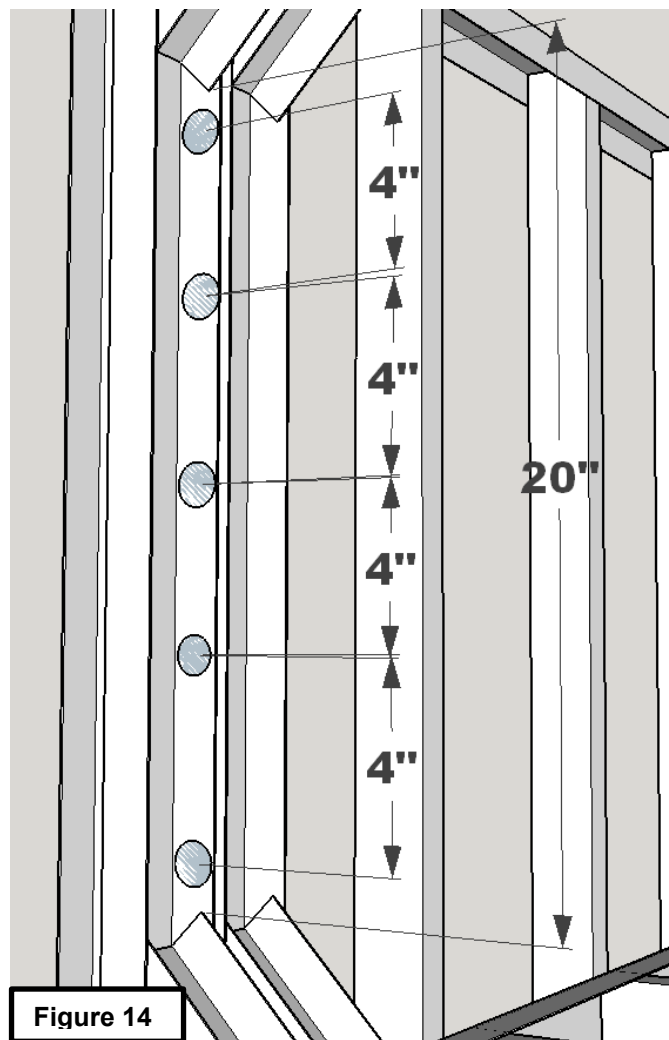
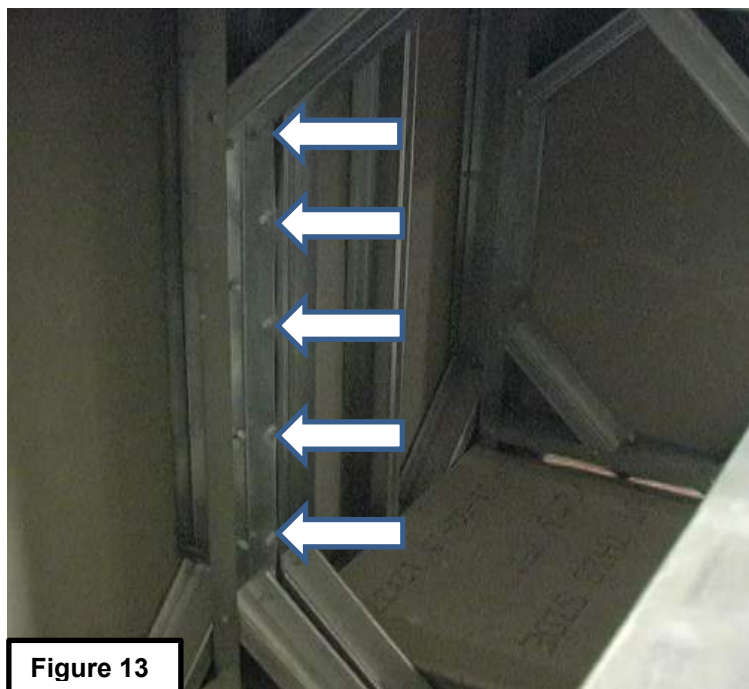


**NOTICE** Use of non-galvanized screws can rust and fail. Screw failure is dangerous and should be avoided by using properly coated screws.

**NOTICE** Use of smaller or lighter screws, or screws with the wrong head shape can cause screw failure which is dangerous and should be avoided by using proper screws.



- G. Attach rear side panel uprights together with 5 screws, spaced 4" apart (as shown in Figures 13 & 14). Use #10-12 HILTI  $\frac{3}{4}$ " metal to metal self-drilling galvanized HVAC screws (HILTI item #423253 or equivalent). Ensure that the screws are fully seated, but do not over tighten.

**NOTICE**

Use of non-galvanized screws can rust and fail. Screw failure is dangerous and should be avoided by using properly coated screws.

**NOTICE**

Use of smaller or lighter screws, or screws with the wrong head shape can cause screw failure which is dangerous and should be avoided by using proper screws.

**NOTICE**

Overtightening screws can strip out threads or cause heads to fracture. Do not over tighten.

- H. When you have finished attaching the screws in the back vertical tracks, place the clamps in the front vertical tracks (as shown in Figure 15).



Figure 15

- I. Attach front side panel uprights together with 5 screws, spaced equidistant apart (as shown in Figures 13, 14, & 16). Use #10-12 HILTI  $\frac{3}{4}$ " metal to metal self-drilling galvanized HVAC screws (HILTI item #423253 or equivalent). Ensure that the screws are fully seated, but do not over tighten.



Figure 16

**NOTICE** Use of non-galvanized screws can rust and fail. Screw failure is dangerous and should be avoided by using properly coated screws.

**NOTICE** Use of smaller or lighter screws, or screws with the wrong head shape can cause screw failure which is dangerous and should be avoided by using proper screws.

**NOTICE** Overtightening screws can strip out threads or cause heads to fracture. Do not over tighten.

- J. Repeat step C-I for all other modules in your kitchen.

**If you are using raised bar components, follow the steps below. If you are not using raised bar components, continue to Section 4.**

- K. Remove all top Permabase panels from raised bar components (as shown in Figure 17). This will allow access to the threaded inserts that you must connect with bolts. Place the Permabase panels and screws to the side so they will not be damaged.



**Figure 17**

**NOTICE**

Place the Permabase panels and screws to the side so they will not be damaged.

- L. Attach bar modules together with the threaded bolts provided (as shown in Figure 18). You must install bolts into all threaded inserts provided. If you misplace bolts or they are absent from your shipment, you can use Everbuilt 804128 galvanized serrated flange bolts as an equivalent. Tighten bolts but do not over-torque.



**Figure 18**

**WARNING**

You must install bolts into each threaded insert on every piece. Skipping this step will compromise the structural integrity of the modules and can result in product failure.

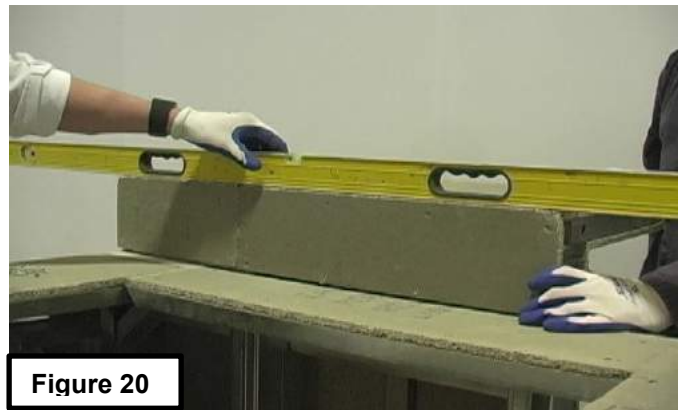
**NOTICE**

Use of smaller or lighter bolts, or bolts with the wrong head shape can cause bolt failure which is dangerous and should be avoided by using proper bolts.

**NOTICE**

Overtightening bolts can strip out threads or cause heads to fracture. Do not over tighten.

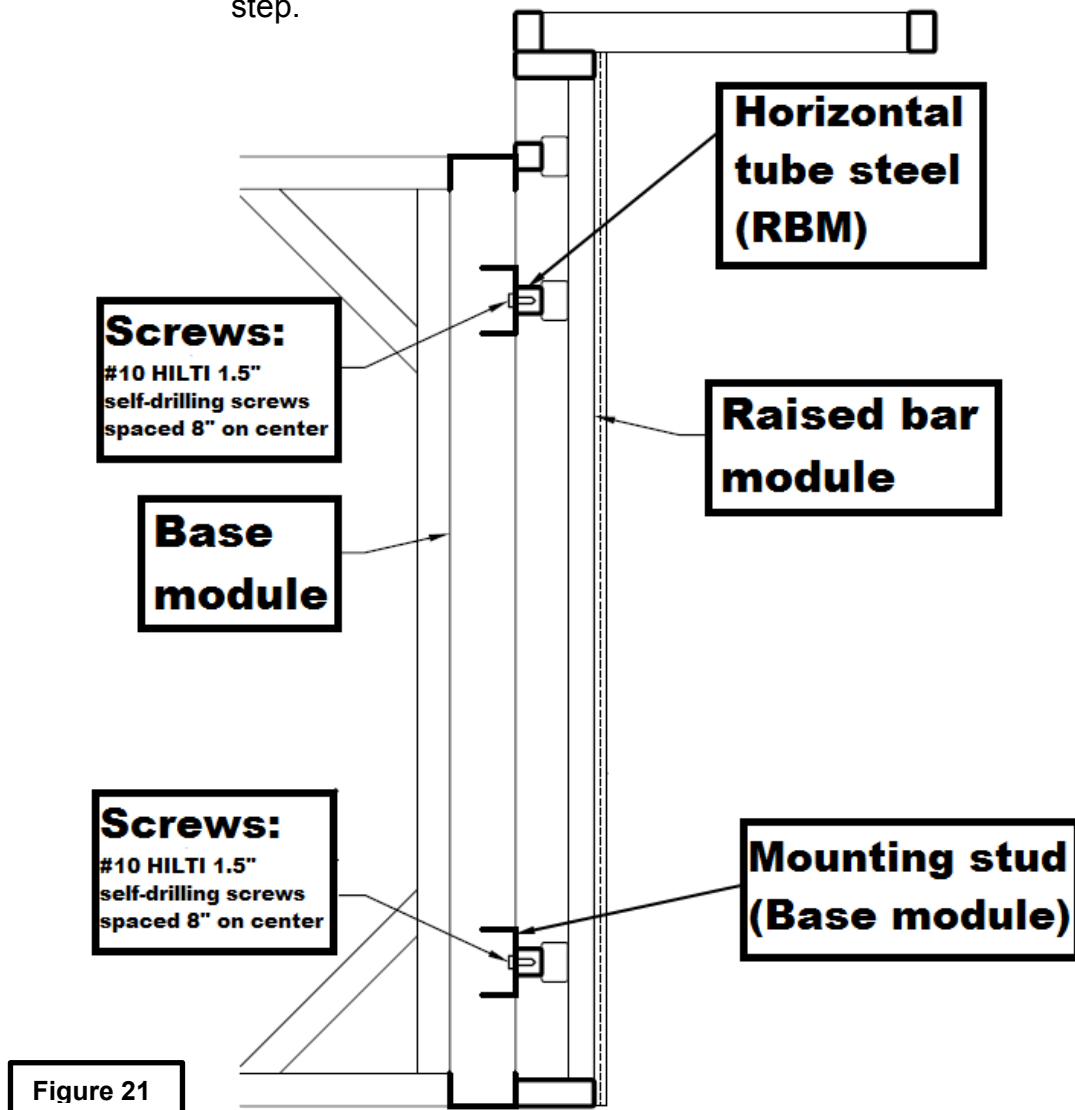
- M. Carry raised bar components to the installation site. Make sure your path is clear of obstacles and lift components as a team.
- N. Using your module drawing as a guide, dry fit them to the base modules to ensure proper fit before installation. Bar must be held in place with one installer for every 4 feet of raised bar modules to ensure safety. As you align the raised bar components, use shims underneath modules as needed. Most surfaces have a slight slope, so shimming modules will ensure a level countertop surface. Check for level both side to side and front to back (as shown in Figures 19 & 20). Ensure that long or tall gaps are hard packed with filler

**NOTICE**

Do not leave modules unsupported. Ensure that long or tall gaps are hard packed with structural filler. Unsupported cantilevers will create stress on fasteners and can cause fastener failure which will cause the frame to collapse.



- O. While leveling and dry-fitting the bar modules to the base modules, you must consider the following requirements (referenced in Figure 21) before attaching the bar to the base modules:
- a. Visually inspect that the horizontal tube steel of the raised bar module lines up with the mounting stud in the base module. Screws must be installed from inside the base module into the raised bar module.
  - b. If the base module steel track and the raised bar module horizontal tube steel do not line up, stop and correct the misalignment.
    - i. You may move the mounting stud in the base module, but you must ensure that all screws are properly reinstalled and that the structural integrity of the components has not been compromised during this step.



**WARNING**

Improper reassembly of modules can cause modules to collapse, which is a dangerous safety hazard. You must use fresh screws and uncompromised sheet metal pieces.

**WARNING**

Horizontal tube steel and base module mounting rails must line up properly. Modules can collapse if screws are not fastened securely and fully sunk into base module mounting rails.

- P. Install HILTI #10 1 ½” self-drilling galvanized metal-to-metal screws (HITLI item #2099041 or equivalent) from inside the base module **top mounting stud** into the horizontal tube steel of the raised bar module (as shown in Figure 22).
- Install screws **every 8”** along the entire length of track inside each base module.
  - Ensure that each screw penetrates the horizontal tube steel of the raised bar module.



Figure 22

**WARNING**

You must install the correct screws with correct spacing between screws. Skipping this step can cause modules to collapse, which is a safety hazard.

- Q. Install HILTI #10 1 ½” self-drilling galvanized metal-to-metal screws (HITLI item #2099041 or equivalent) from inside the base module **bottom mounting stud** into the horizontal tube steel of the raised bar module (as shown in Figure 23).
- Install screws **every 8”** along the entire length of track inside each base module.
  - Ensure that each screw penetrates the horizontal tube steel of the raised bar module.



Figure 23

**WARNING**

You must install the correct screws with correct spacing between screws. Skipping this step can cause modules to collapse, which is a safety hazard.

## 4

## HOW TO INSTALL YOUR APPLIANCES AND ACCESSORIES

The instructions below are attached for your convenience only. Consult your appliance manufacturer's instructions for more detail. These instructions are not intended to supersede any manufacturer instructions.

Once modules are firmly attached together, mount stainless steel appliances into the ready openings.

For doors and drawers, attach into modules with HILTI #10 1 ½" self-drilling galvanized metal-to-metal screws (HITLI item #2099041 or equivalent). Check that each component is level and plumb as you mount it (as shown in Figures 24 & 25).



Figure 24



Figure 25

**NOTICE** Use of non-galvanized screws can rust and fail. Screw failure is dangerous and should be avoided by using properly coated screws.

**NOTICE** Use of smaller or lighter screws, or screws with the wrong head shape can cause screw failure which is dangerous and should be avoided by using proper screws.

**NOTICE** Do not overlook trim kits or mounting accessories.

Grills, side burners, and ice chests slide into the cutout and should be mounted per manufacturer specifications **after** the countertop is installed. Install anti-tip hardware onto refrigerators, dishwashers, or smokers as recommended by the manufacturer.

## HOW TO INSTALL YOUR COUNTERTOP

These instructions below are attached for your convenience only. Consult your local building code, countertop fabricator, or the Marble Institute of America for more detail. These instructions are not meant to supersede any local codes or industry standards.

Templating the countertop is often done before the stone countertops are fabricated to ensure proper fit.

- A. At the installation site, dry assemble all stone pieces in place to verify satisfactory fit prior to the application of any adhesive (as shown in Figure 26). Countertop weight will not exceed 20 pounds per square foot.



Figure 26

**CAUTION** Lifting too much weight will cause injuries. Lift each component as a team. Do not exceed what each team member can carry. Use equipment (lifting straps, power lift gates, etc.) safely to assist the lift.

**WARNING** Countertop effective weight will **not** exceed 20 pounds per square foot. Excessive weights will cause modules to collapse.

- B. Mortar is applied to the tops of the modules with a notch trowel in an even coat (as shown in Figure 27). Use enough mortar to bond to the entire surface.



Figure 27

**NOTICE** Overuse of mortar will cause the countertop to sit too high and can adversely affect grill or side burner cutouts

**NOTICE** Do not use excessive mortar as it will smear or drip down the face of the modules.



- C. Carry and set stone in place on top of the modules. Final position of the stone is done manually. You must use your level and squaring tool to ensure countertops fit level and square. Stone shall be carried upright to prevent breakage. Exercise extreme caution and care while transporting stone. It is very heavy and easily breakable if mishandled.

**CAUTION** Carry granite upright; do not carry granite flat. Carrying pieces flat will cause them to break and breaking pieces are sharp and cause severe injuries.

**CAUTION** Lifting too much weight will cause injuries. Lift each component as a team. Do not exceed what each team member can carry. Use equipment (lifting straps, power lift gates, etc.) safely to assist the lift.

- D. Shims are commonly employed to level the stone countertops (as shown in Figures 28 & 29). Long or tall spaces between the module and countertop should be hard packed with filler to prevent stone cracking.



Figure 28



Figure 29

**NOTICE** Do not compromise clearance to combustibles with filler materials

- E. Fill the between stone pieces. The stone surface should be taped off to prevent contact between the polished surface and joint filler material. Joint compound should complement or match the color of the countertop.



Figure 30

**NOTICE** Tape off countertop before applying joint compound; joint compound discolors countertops.

- F. Mark and tape off notching around grills and side burners (as shown in Figure 31). Grind out the notches and polish the inside edges. Polishing will take multiple steps with varying polish pads. Failing to follow manufacturer specs on notching width can cause grill malfunction.



Figure 31

**NOTICE** Failing to adequately notch around grills can cause grill malfunction. Sheet metal must expand when it is hot, and notches provide space for manifold to expand.

**CAUTION** Granite dust is abrasive and dangerous. You must wear a safety mask, safety glasses, and use dust mitigation equipment while using a grinder.

- G. After countertops are installed and seams filled, a sealer will be applied.
- H. Once the sealer and countertop mortar has set, grills, side burners, and sinks will be installed (as shown in Figure 32). Installing them too early can cause countertop to shift out of level.



Figure 32

**NOTICE** Do not install grills, side burners, ice chests, or sinks until countertop mortar has set. Installing a grill, side burner, sink, or ice chest before countertop mortar has set will cause the countertop to shift out of level.

**NOTICE** Do not mortar in grills or side burners – they must be removable for service

## HOW TO INSTALL YOUR VENEER:

These instructions below are attached for your convenience only. Consult your local building code, finish supplier, or the relevant industry institutions for more detail. These instructions are not meant to supersede any local codes or industry standards.

Install veneer after the countertop has been installed to achieve best finish at the top edge of the module.

Follow the manufacturer's specifications and instructions when installing stone, stucco, or tile. These finish suppliers have excellent trade resources and instructions:

Canyon Stone	<a href="http://www.canyonstone.com/">http://www.canyonstone.com/</a>
Dryvit	<a href="http://www.dryvit.com/home/default.asp">http://www.dryvit.com/home/default.asp</a>
Marble Institute of America	<a href="http://www.marble-institute.com/">http://www.marble-institute.com/</a>

Install stone or tile up to the edge of stainless steel doors or drawers. For best fit and stucco finishes may require removal of doors and drawers and then subsequent re-installation after stucco finishing.

Leave a gap under the grill per manufacturer specifications to allow for combustion air flow.

### NOTICE

You must leave an air gap under the grill. Covering this air gap will cause the grill to overheat.

### NOTICE

Do not expose stainless steel products to acid wash or other harsh finishing products. Acids will destroy stainless steel and cause it to rust immediately.

## REQUIRED MAINTENANCE:

TASK	WHO MUST COMPLETE?	FREQUENCY
INSPECT VENTS FOR BLOCKAGE OR DEBRIS INSIDE AND OUTSIDE MODULE	HOMEOWNER OR PERSON USING GRILL/KITCHEN	EACH TIME GRILL/KITCHEN IS USED
INSPECT METAL FRAMING FOR CORROSION OR STRESS TO FRAME	QUALIFIED SERVICE TECHNICIAN	ONCE PER YEAR
INSPECTION AND SERVICE OF APPLIANCES, AND UTILITY SERVICE (GAS, ELECTRICAL, ETC) INSTALLED IN THE KITCHEN	QUALIFIED SERVICE TECHNICIAN	AS SPECIFIED BY APPLIANCE MANUFACTURER