



QUART

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INSTALLATI  
ON MANUAL &

FABRICATI

ON

INSTRUCTI

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**MANUAL  
HANDBOOK**

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Measure all sides.

Measure all diagonal lengths.

## FABRICATION OVERVIEW

Measure the midpoints of the cutouts and setbacks.

Measure the inside dimensions of the base cabinets where the cutouts will settle.  
Note any curvature of the walls or misalignment.

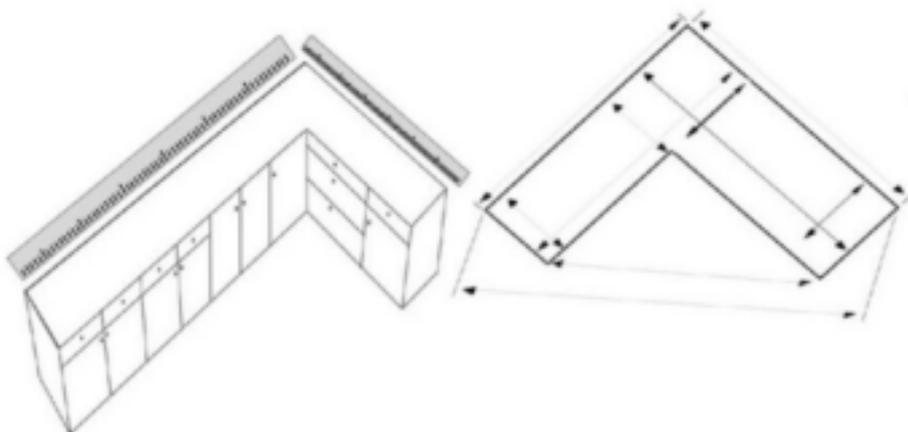
Measure the clearance from the doors and drawers to the top of the face frames to ensure that laminations won't interfere with their operation.

Make sure to check with the Fabrication Shop for other important information they might require.

All corners must have a minimum radius of 3/8".

Measure for overhangs at standing appliances for clearance and fit.

Note: Remember to have detailed drawings showing the layout, where to place the seams, sinks, appliances, and other information.



# SEAM

# PLACEMENT

When fabricating and installing American Quartz products, there are a variety of factors that may make it necessary to seam two pieces of material together

- The length of the top is longer than the slab
- Optimum material yield
- Weight of a finished top size
- Configuration of the finished top

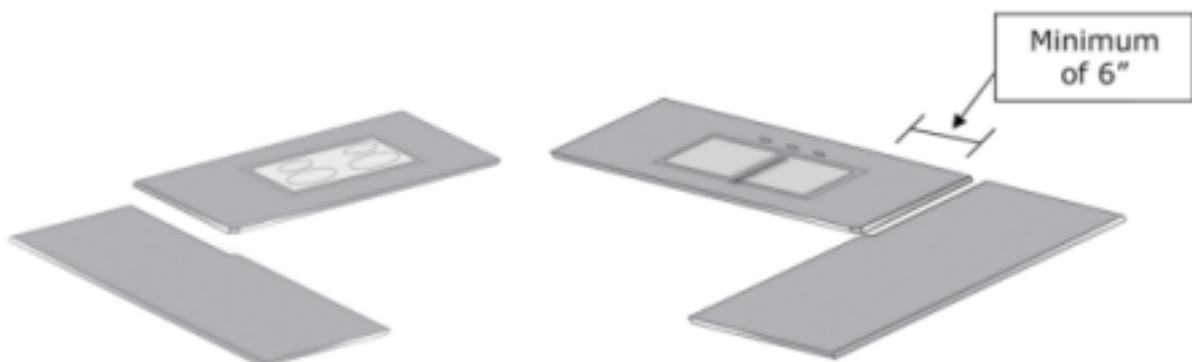
## OVERVIEW

- Place seams to get maximum yield of the material.
- Try to minimize the number of seams on the countertop.
- Avoid placing seams over dishwashers or trash compactors.
- Do not place seams within 6" of cutouts (sinks, cooktops, etc.)
- Avoid placing seams within 18" of a finished end.
- All corners must have a minimum radius of 3/8".

Fabricator may ultimately determine the final placement.

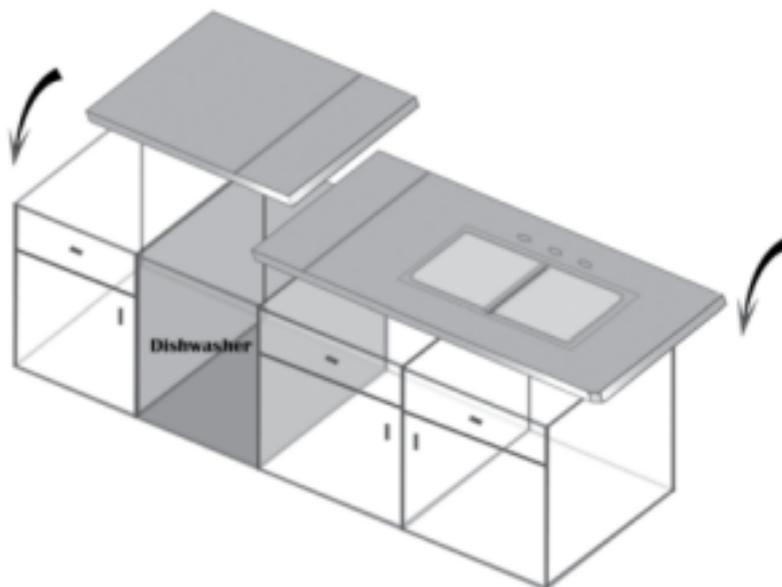
Note: In order to minimize the possibility of cracking, there are several guidelines which need to be followed when positioning seams. Remember, even though the Template Technician will create seam placement when constructing the templates, the

All seams should be at least 6" from all cutouts, such as sinks, cooktops, and other appliances. In addition, from an appearance point of view, try to position the seams so that they don't look out of place.



## FABRICATION

Seams should be avoided over the dishwasher or compactor. We do not recommend or honor the warranty if a seam is placed over a dishwasher or a trash compactor. It is important to make a note on the templates if a seam has been placed over a dishwasher. The Fabricator may review the layout and try to rearrange the design according to your notes.



## "L" SHAPED CABINETS

"L" shaped cabinets joined together at an angle are common configurations used to negotiate a corner. When building tops for these areas, it is advisable to place a seam at the corner rather than building on top.

The advantages of seaming the top are as follows:

- Reduced chance of breakage during fabrication

- Reduced chance of breakage during transportation

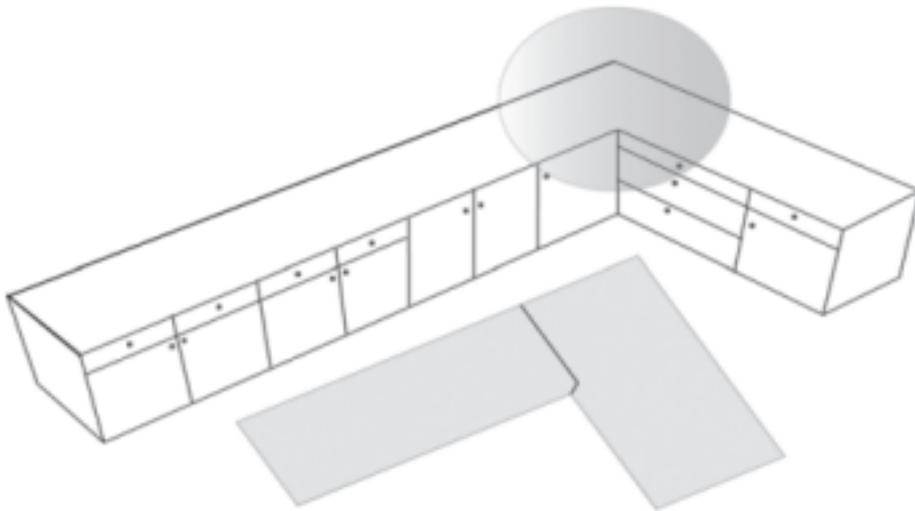
- Reduced chance of breakage after installation due to stress at the corner
- Improved ease of transporting and handling

There are three basic seam configurations used in corners as follows: Key cut

- this is the most efficient seam configuration from the standpoint of material yield and labor costs. (Shown Below)

- 2" return with 1 ½" radius cut on the inside corner - many shops prefer this seam configuration for aesthetic reasons, and to match other inside corners cut like this without seams on the same job.

- Mitered seam - this configuration is not commonly used because of poor material yield and it creates a longer seam that's more difficult to deal with.



# SUPPOR

SUPPORT

## PERIMETERSUPPORT

## TS PERIMETER

### NOTES

Similar to natural stone, American Quartz is extremely heavy and needsto be supported properly. With 3cm material, the tops can be set directly on top of the properly installed and leveled cabinets, as this provides the perimeter and cross support required. This support is not adequate for 2cm tops, and 2cm profiled edges are generally laminated. For these reasons, we require built-up perimeter support or a full sub-top on our 2cm material.

back of the cabinets, and crosswise, (front to back) at the ends, and at a maximum of 3' o. c. (over cabinet partitions) intervals. Front-to-back support is also recommended under and along both sides of all seams.

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Recommended material –  $\frac{5}{8}$ " or  $\frac{3}{4}$ " x 2"  
Moisture resistant MDF  
Moisture resistant plywood  
Particleboard is not acceptable for this application  
Wood strips should be installed continuously along the front and

### **FULL SUB TOP SUPPORT**

## **FULL SUBTOPSUPPORT**

Many installers prefer to use a full sub-top rather than support strips. A full sub-top has some advantages and is required in areas of overhang and cantilever.

Recommended materials for full sub tops

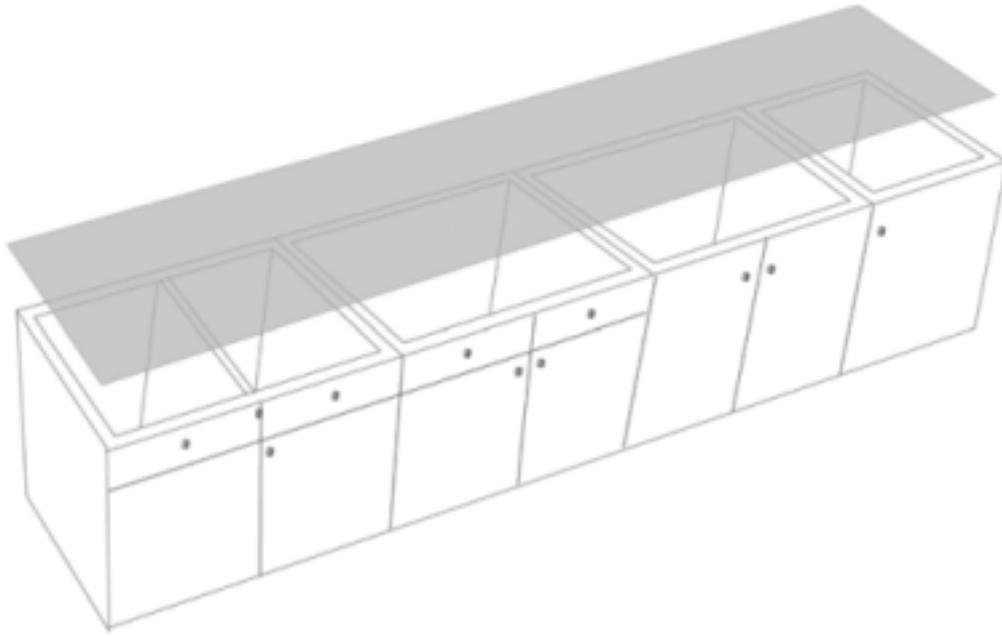
$\frac{3}{4}$ " moisture resistant MDF

$\frac{3}{4}$ " moisture-resistant plywood

Particleboard is not acceptable for use as support.

When installing a full sub-top, do not seam the sub-top material in the same location as the countertop material. Avoid seams in cabinetry whenever possible.

When using either full sub top support or full perimeter support, the material must be attached tightly to the cabinets and be flat and leveled.



## OVERHANGSUPPORT

Depending on the application, you might be required to provide overhang support for the countertop.

Following are some guidelines to follow when working with overhangs.

### REQUIREMENTS

Support not required

Full sub top with corbels

### 2CM QUARTZ

Overhangs under 12". Use full sub tops greater than 6".

12" – 18" use full sub top along with corbels evenly spaced at 3' on center or less.

### 3CM QUARTZ

Overhangs under 16"

16" – 24" use full sub top along with corbels evenly spaced at 3" on center or less.

### 2CM QUARTZ 3CM QUARTZ

### REQUIREMENTS

Full sub top with legs or columns

Overhangs over 18" use full sub top along with legs or columns connected at the top with rails of adequate size to provide perimeter support.

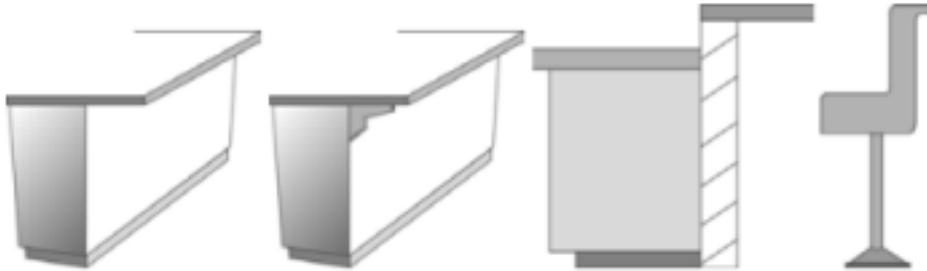
Over over 24" use full sub top along with legs

or columns connected at the top by rails of adequate size to provide perimeter support.

### REQUIREMENTS

Full sub top and bracket or corbel support at 3' on center or less is always required.

Raised bar mounted on top of pony wall



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# BASIC MACHINERY

American Quartz recommended fabrication shops should be fitted with machinery designed to work with natural quartz surfaces while providing the highest quality possible. Consideration of heavy equipment should be carefully researched and implemented before working with American Quartz.

The following chart briefly describes some of the basic heavy machinery used in a fabrication shop. The type of machinery in each shop will differ according to individual needs, and state/federal requirements for safety.

**Polisher (Multi Head)**

**Saw (Bridge Saw)**

**Handling Equipment**

**CNC Machine**

**Water Treatment**

**Line Polisher (Single Head) Line**

**Air Compressor**

This is the most important piece of equipment. Bridge saws will cut full slabs of material with greater accuracy, precision,

and speed than conventional hand tools. Bridge saws can have many different options ranging from manual to fully automated.

Computer Numerically Controlled (CNC) Technology.

The CNC mill (router) uses digital templates or measurements to automatically cut out, profile, and polish the perimeter of a piece and internal cutouts such as sink holes, etc.

Machine designed to profile and polish edges in a straight line only.

Similar function as the single head polisher but it is capable of much higher production

rates.

Overhead gantries and jib-booms facilitate the movement of material around the shop and the ability to load pieces on the machines without the necessity of forklifts in space prohibitive areas.

A system of pumps, filters, and settlement tanks is used for the recirculation of shop water.

Used to supply machines and pneumatic hand tools with sufficient air pressure and volume to operate efficiently.

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A fabrication shop, large or small, will require most of the tools listed in this section.

While the following is a brief overview of some of the basic tools and equipment required in a shop in order to fabricate American Quartz, it is not intended to be comprehensive or complete and should not be solely relied upon for information. This overview does not address any personnel safety equipment or requirements. Contact OSHA and your local Employment Development Department for that information.

## Handling and Storage Equipment Hand

## Polishing Supplies

## Tools

## Safety Equipment

## Adhesives

## Accessories

Fork lift, vacuum lifter or slab clamp, lifting boom, A-frames, slab storage racks, A-frame carts, slab dolly, vacuum cups, work bench/fabrication tables, and racks for finished pieces.

## Cutting and Grinding Supplies

Rail saw/polishers (air or electric) that are usually 4" and must be variable speed with center water feed. Angle grinders for hand cutting and shaping (min. 5"), router and appropriate profile cutters (4") and clamps for laminating if needed.

The following two component adhesives are commonly used in a fabrication: flow and/or knife grade epoxy, polyester, methacrylate, ester, and penetrating acrylic. Also required are appropriate pigments.

Diamond granite blade, properly sized to fit rail saw, turbo diamond blades properly sized to fit angle grinders (4" min. diamond cup wheels), 5" contour blade for cutting radius, zero-tolerance grinding drums 50 & 80 grit, and core bits for faucet or grommet holes (usually 1 3/8" to 2 1/2").

3" and 4" flexible and ridged backer discs (velcro), 3" and 4" polishing pads (50, 100, 200, 400, 800, 1500, 3000 grit), final polish pad, granite polishing

powder, and felt pad. 3 step Quartz polishing pads can also be used.

Respiratory dust masks, ear plugs, safety glasses, steel toe rubber boots, waterproof aprons, gloves, back supports, and ground fault interrupters for all electrical applications.

Tape measures, carpenters square, combination square, bevel square, angle finder, compass, C clamps, bar clamps, extension cords, air hoses and accessories, 4' level, 8' straight edge, whiteout pens/china markers, rags, acetone or denatured alcohol (preferred), single edge razor blades, propane torch & tips, steel wool, masking tape, and shims.

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# TEMPLATE TOOLS

Adequate number of Luan Strips (Usually 1/8" thick, 2" wide, and about 8' long). Please check with the fabrication plant for preference.

Utility knife

Heavy-duty scissor or shears

Hot glue gun with extension cord

Glue sticks

Cardboard

Magic markers or Sharpie pens

Tape measure

Pen and paper

Straight edges

Level 2, 4, or 6

Square framing or construction protractor

Sample decorative edges

Sample corner profiles

Plastic corner templates (to trace different corners on the template) Checklist

Customer sign-off sheet

Note: Digital templating is available through different manufacturers. Please ask your tool supplier which system will benefit you most efficiently.

# INSTALLATION TOOLS

As an installation technician of American Quartz, you will require the following tools. Having the right tools for the job will save time and yield professional results.

## Handling Equipment

- A-frame cart or slab dolly to carry the top from the truck to the installation site

## Safety Equipment

- Protective gloves
- Proper safety shoes
- Safety glasses and dust mask (when cutting materials)
- Ear plugs
- Back support

## Straight Edges

- Various sizes (4' to 8' recommended)

## Level

- Various sizes (At least 4' recommended)

## Angle Grinder

- 4 ½" or 5" with diamond blades and cup wheels

## Polisher and Polishing Pads

- Various pads for any touch-up work and/or other alterations made in the field

## Silicone

- Variety of colors to match different colored tops

Utility grade for setting tops

Jig Saw or Circular Saw

Used to cut out holes in the sub-top if applicable (i.e. sinks, cooktops) or other woodworking applications such as filling in missing cleats, cutting prop sticks, etc.

Basic Tools

Hammer

Tape measure

Combination square

Framer's square

Hand tools such as screwdrivers, chisel, and flat pry bar, etc.

Seaming Kits

2-part knife grade polyester

Variety of color pigments to match the top

Spatula or putty knife for mixing and applying glue

Seaming Clamps

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## INSTALLATION TOOLS

Drill

Core bits for any necessary drilling (various sizes)

Shimming materials (only to align the top for seaming)

Vacuum

Masking tape

Single-edged razor blades

Steel wool (#0)

Acetone or denatured alcohol to clean excess adhesive and tools

Clean rags

Masking tape

Roll of utility paper to protect finished floors in path of install  
Saw horses for cutting on tops outside

Checklist and customer sign-off sheets

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# ADHESIVE APPLICATION

Basically there are two types of silicone used in a typical American Quartz installation:

100% pure silicone is used to fix the tops to the substrate and glue the splash or other vertical pieces to the wall as well as sealing any seams between pieces.

## **NOTE**

Many Distributors carry colored silicones which can be used to caulk splash to countertop connections with very good results, but colors are usually do not exactly match the stone colors. Many installers prefer to use a semi transparent or translucent silicone which

tends to take on the color of the stone and create a more acceptable caulk joint.

### **NOTE**

Polyester is a two-component glue consisting of adhesive with about 3–4% hardener added to it to cause the mixture to cure. Once the proper amount of hardener is added, the mix will be workable for about 10 minutes, depending on the temperature of the air and the surface. Clamps can be removed and work on the pieces can begin in about 30 to 45 minutes.

- Paintable silicone is used to caulk between stone and wall connections

companies use polyester to seam materials together. Whether seaming two countertops or laminating a built-up edge for profiling, polyester is the most versatile adhesive due to its fast cure time, ability to color match, and great bonding qualities to engineered stone.

Polyester is colored using different tints designed specifically for polyester. These colors are combined to match the stone being used and are added to the adhesive before the hardener is added.

In the natural quartz surface industry, many

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### **TIP**

When mixing and matching colors, place two scrap pieces of the stone to be matched together side by side, creating a simulated seam. Knife the colored glue in the seam. It will be obvious whether you need to lighten or darken the color in the finished mix.

### **TIP**

Please consult your Distributor regarding adhesive recommendation for American Quartz.

# ADHESIVEAPPLICATION

Methacrylate ester is a two component adhesive that is also commonly used in quartz surface fabrication and installation. Although not as versatile as polyester because the color is pre-mixed and cannot

be adjusted, this adhesive is much more convenient because it is dispensed and automatically mixed with a caulking gun with mixing tips, making the application much quicker and with far less clean up. Methacrylate adhesives can be used in all applications where polyester would traditionally be used.



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