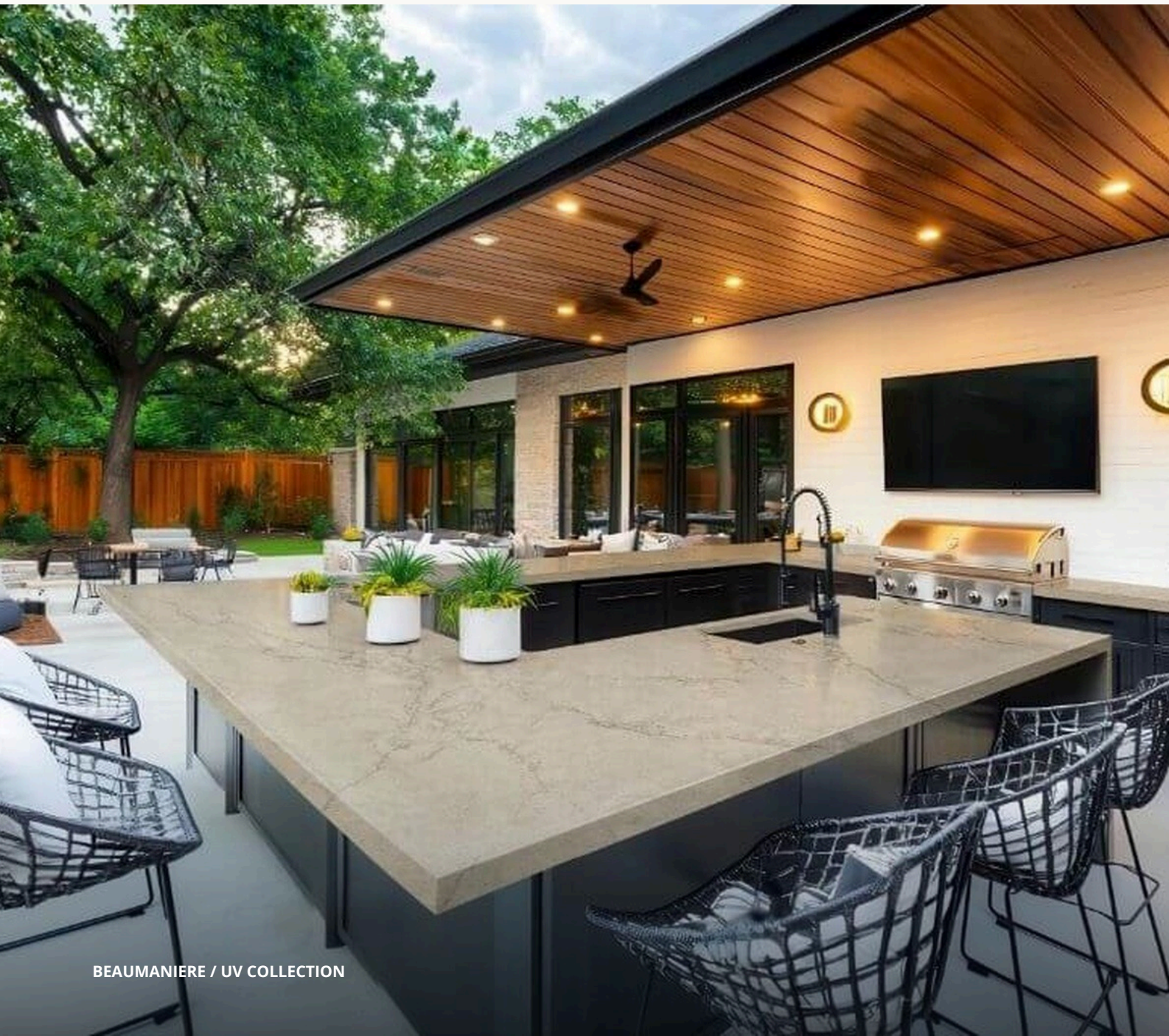
crescent quartz™

OUTDOOR SURFACES / FABRICATOR RESOURCE

Fabrication & Installation Guide

Thoughtful materials. Considered craftsmanship.



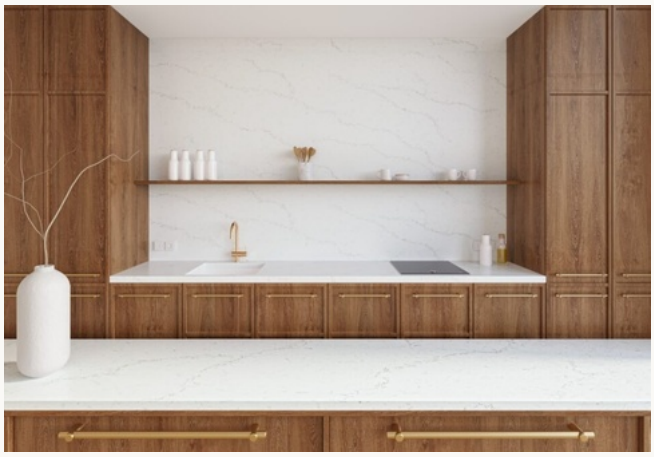
BEAUMANIERE / UV COLLECTION

Designed to Inspire

Nature-inspired surfaces, thoughtfully designed spaces. This guide brings together information on handling, fabrication, installation, and care for outdoor surfaces.



MARBELLA PERLA HONED / HERITAGE COLLECTION



SAVONA



PIETRA SAPONE

PREPARE
04–05

FABRICATE
06–20

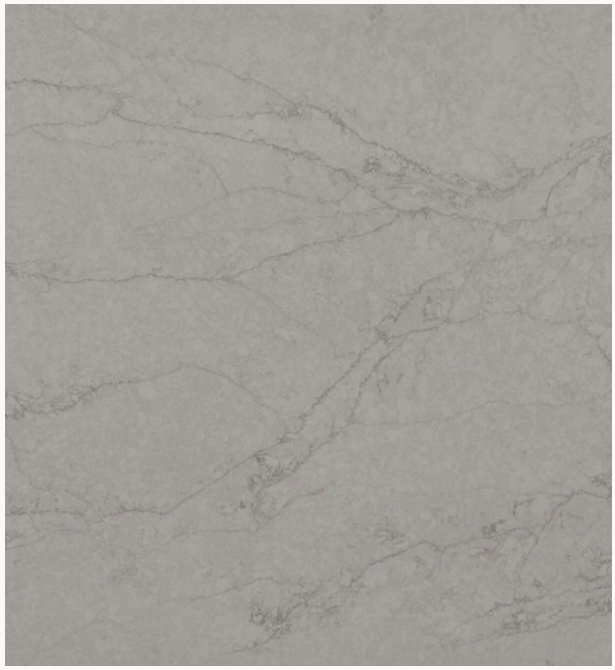
INSTALL & CARE
21–25

Outdoor, Thoughtfully Considered



BIANCO CORTE / UV COLLECTION





BEAUMANIERE / OUTDOOR ROOM & SLAB DETAIL

Know Your Slab

SLAB SIZE

3230 × 1615 mm

THICKNESS

30 mm

FINISH

Leather



Verify the selected slab's dimensions, thickness, finish, and batch details before fabrication.

Read the Label

Confirm the product name, color, size, and batch information on the slab label before fabrication.

crescent quartz™

PRODUCT CODE & NAME	Refer to the selected slab.
SLAB SIZE	Verify dimensions and thickness.
BATCH NUMBER	Check all slabs for the project.

Illustrative field guide only. Actual supplier labels and product details may vary.



BIANCO CORTE / SLAB DETAIL

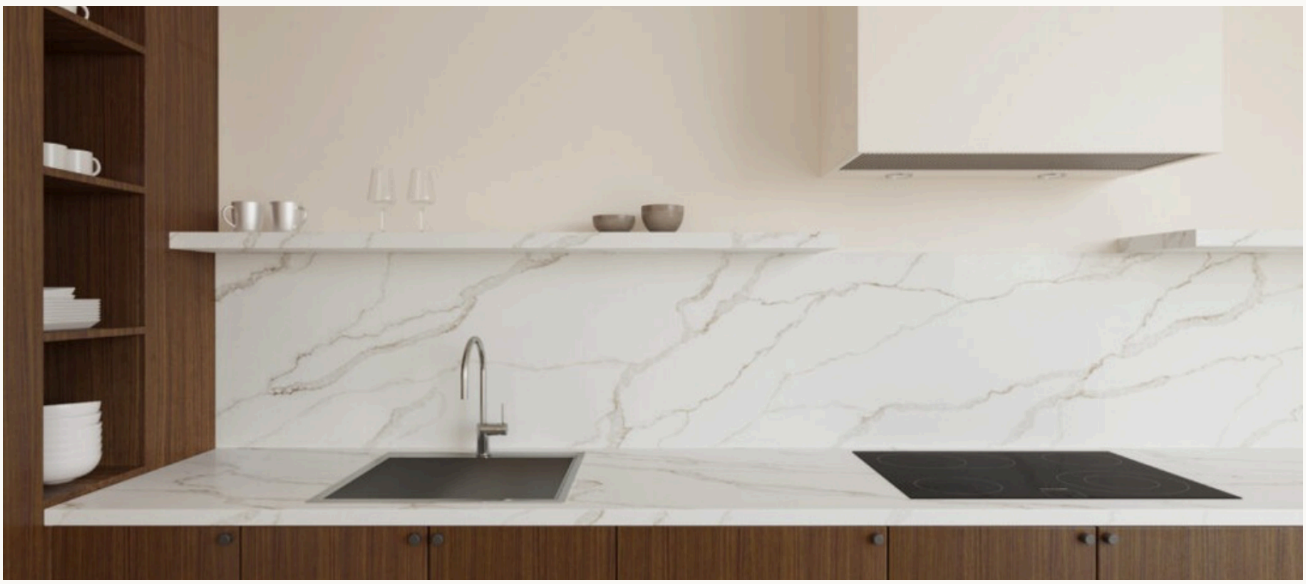
Inspect Before Fabrication

VISUAL INSPECTION OF SLABS

A visual inspection for defects and color matching is essential when working with Crescent Quartz. Make this standard practice before cutting any material. Complete the following steps to inspect slabs for defects visually:

- Do not inspect slabs with the protective film on.
- Inspect both the front and the back of slabs for any defects.
- Look for any hairline cracks in the slab.
- Check all slabs for accurate color matching before fabrication, whether the layout calls for them to be seamed or unseamed.
- Check slabs for correct dimensions, warpage, irregular spots, or other defects that make the slab unacceptable for fabrication.
- Check for accurate color matching of all Crescent Quartz colors, and the orientation/layout of pattern flow.

> **Please note:** Once the fabricator has deemed a slab acceptable and it is cut or machined in any way, the slab cannot be exchanged. The fabricator is responsible for determining whether slabs are fit for fabrication; if they are not, exchange them with the supplier. **Crescent Quartz will not accept claims for any of the above once the slab is modified or fabricated in any way.**



CALACATTA TEMPEST

Plan the Pattern

LAYOUT & PATTERN MATCHING

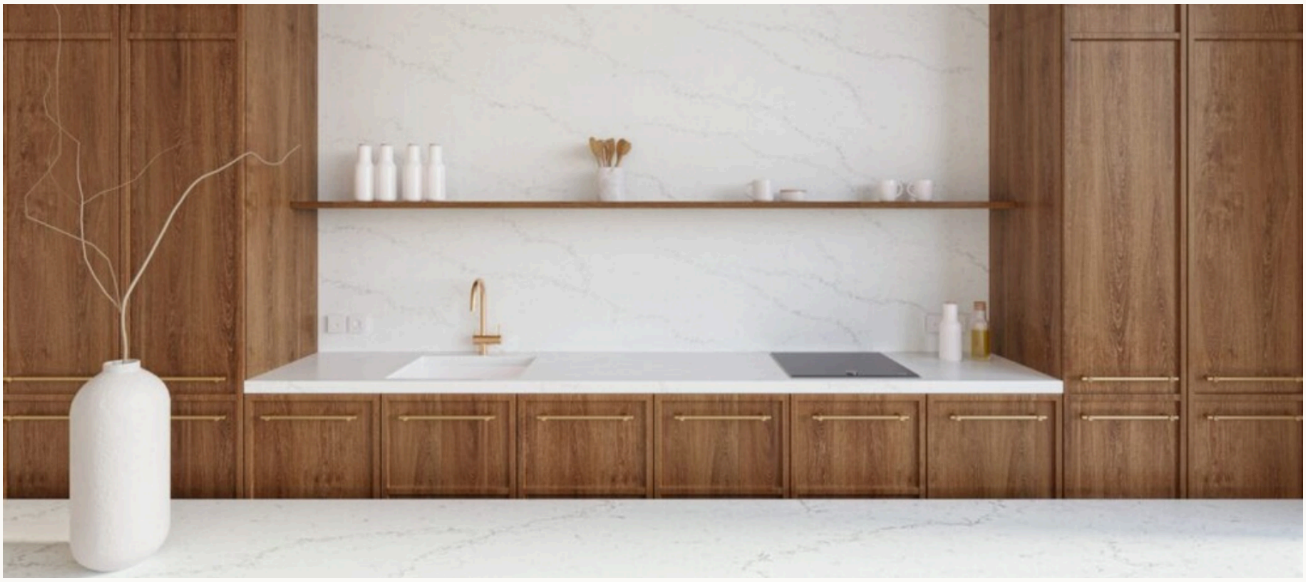
Always inspect all material before fabrication. Most Crescent Quartz designs replicate natural stone, a veined material with a non-directional pattern. Vein distribution can differ throughout the slabs and at all edges, whether factory or fabricated, so take extra care around seam locations. Veined patterns require a more careful, specialized layout to achieve the optimal look.

Color-matching slabs before fabrication is an important step. Crescent Quartz slabs typically show slight color variation between batches and/or production cycles due to the complex blending of natural minerals and raw materials.

If your job requires more than one slab, check the Crescent Quartz label for the batch number on each slab. After inspecting all slab numbers, remove the protective plastic film and visually inspect the slabs for color variation, color match, and any other defects before cutting.

> **Don't forget backsplashes.** They must color-match and have vein patterns similar to those on the countertop.

Layout is one of the most important steps in fabricating Crescent Quartz. Because most designs closely replicate natural stone, this process requires a little extra attention to maximize the homeowner's lasting enjoyment.

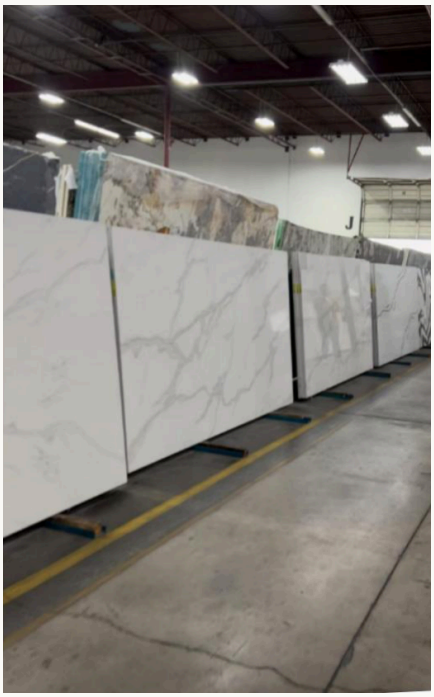


SAVONA

Store with Care

A-FRAME STORAGE IN FABRICATION SHOPS

The best way to store Crescent Quartz slabs that are ready for fabrication or to be shipped to a job site is on an A-frame constructed of wood or metal. A-frame carts should include forklift receivers for loading and transport.



- Double A-frames should have the same number of slabs on each side for proper balance and safety.
- **Large double A-frame carts** are usually 8′ long by 43″ wide with a load height of 60″. Manufacturer-recommended capacity is 4,400 lbs (2,200 lbs per side).
- **Small double A-frame carts** are usually 6′ long by 43″ wide with a load height of 48″. Manufacturer-recommended capacity is 4,400 lbs (2,200 lbs per side).
- **Single-sided A-frames** can also be used and are great for box vans. Manufacturer-recommended capacity is 2,200 lbs. Always strap material to the A-frame.

- For double A-frames: when more than one slab is stored on each side, keep slabs flat without any gaps to prevent warping. Strap slabs to the A-frame to prevent warping or flexing.
- Slabs should always be placed face to face and/or back to back to help prevent damage to the polished side of the slab.
- Crescent Quartz slabs should always be safely secured to an A-frame with straps whenever transported. Never attempt to move a slab on an A-frame if material is not banded or strapped. This applies to transportation in fabrication shops and on trucks/vans.

> **A-frames are acceptable for temporary storage, but never for long-term storage.**

Handle with Confidence

PROPER MATERIAL HANDLING OF CRESCENT QUARTZ

> **Never transport Crescent Quartz horizontally.** Horizontal storage adds stress to the material and causes hairline cracks that could lead to breakage.

- Heavy-duty carts/dollies should be used when moving material around your fabrication shop.
- Heavy-duty slab booms and slab-carry clamps should be used to move material around your shop when using an overhead crane or fork truck.
- All cutouts should be supported with 2" x 4" x 8' support rails when being transported for installation.
- Pneumatic vacuum suction cups can also be used to move slabs and finished material throughout the fabrication shop.
- We recommend that all suction cups be used with white rubber to prevent dark rings from appearing on light-colored Crescent Quartz.

BASIC DIAMOND TOOLING & ASSOCIATED POWER TOOLS

The following tools are a minimum requirement for a professional fabricator to fabricate Crescent Quartz. You can purchase these tools from any Triton Stone location or a variety of suppliers in the United States.

- **Diamond polishing pads** (wet pads only). Preferred grits: 50, 100, 200, 400, 600, 800, 1500, 3000.
- **Diamond polishing pads, honed finish.** Preferred grits: 100, 200, 400, 600.

- Diamond cup wheels
- Diamond core bits
- Diamond contour blades (manual sink cutouts)
- Diamond turbo blades (5" and 6" sizes)
- Diamond router bits (edge detail)
- Diamond bridge saw blades (size varies with your bridge saw's horsepower)
- Silicon carbide grinding wheels (less expensive than diamond cup wheels)
- Back-up pads, rigid and flexible (5/8-11 threads for polisher and grinder)
- Pneumatic polisher (0–4,000 rpm)
- Electric grinder/polisher (variable speed of 2,800–11,000 rpm preferred)
- Water supply units for grinder and polisher if not supplied with unit

Equip Your Workspace

ADDITIONAL RECOMMENDED FABRICATION EQUIPMENT

- Bridge saw with horsepower of 20 or higher
- Automatic edge profiler
- Computer numerical control (CNC) machine
- Waterjet
- Handheld edge profiling machine
- Fork truck
- Overhead crane
- Fabrication tables
- Air compressor
- Water supply source
- Stone carts/dollies
- A-frames/storage racks
- Slab clamps

BASIC SAFETY EQUIPMENT

> **The airborne dust generated during fabrication may be a risk to human health if inhaled.** Always cut and polish Crescent Quartz with wet diamond tooling and proper ventilation throughout the shop and offices. Fabricators should always use approved dust masks and eye, ear, and foot protection when fabricating Crescent Quartz.

The following list includes basic safety equipment options.

- Safety first-aid kit
- Dust masks (indoor and silica rated)
- Safety glasses
- Solvent-resistant gloves
- Ear plugs
- Waterproof, steel-toed boots
- Waterproof apron or rain suit
- Leather gloves (for moving sharp slabs)
- Ground fault interrupter (GFI) for electric tools in a wet environment

Put Safety First

STANDARD SAFETY PRACTICES AND PROCEDURES FOR FABRICATORS



1. Always wear protective clothing. Serious injury can occur if you do not follow safety precautions in the fabrication shop or on the job site.
2. Follow all safety instructions and warnings on the material safety data sheets (MSDS) for all products used in the shop.
3. Read and follow all manufacturers' safety guidelines for all power tools and fabrication equipment used in the shop.
4. Steel-toed safety boots are recommended during fabrication, when handling or moving Crescent Quartz products, and during installation at a job site.
5. Always use Occupational Safety and Health Administration (OSHA)-approved eye protection. Failing to use eye protection can cause serious injury.
6. Always use hearing protection when working with machinery and power tools. OSHA limits safe sound exposure to 85 decibels over eight hours. Check your equipment specifications and adjust hearing protection accordingly; outside companies can test noise levels in your shop.
7. Because Crescent Quartz is always fabricated wet, the process can create slip hazards. Floors should slope to trench drains, and all water should drain away from the work area. Additionally:
    A. Clean all trench drains regularly of stone slurry to ensure good water drainage.
    B. Squeegee the work area floor several times a day to eliminate standing water.
    C. When using electrical tools, use a ground-fault interrupter (GFI) and stay away from standing water. Ceiling cord drops are a recommended electrical solution.
    D. Pneumatic tools (those powered by compressed air) are always recommended.
8. Check your state's OSHA guidelines to better understand all proper safety protocols.

Measure Every Detail

DIGITAL TEMPLATING

Digital templating captures accurate countertop dimensions and configuration data, and can send it directly to compatible fabrication equipment such as CNC machines, bridge saws, and waterjets. These systems use lasers, digital cameras, and point-to-point digitizers, making digital templating a faster, more accurate, and more efficient way to measure jobs.

MANUAL TEMPLATING

Handmade templates transfer measurements and configurations from the job site to the fabrication shop. Common materials include thin plywood, luan strips, and cardboard. Job drawings with specific job information are essential to support the template: capture sink and appliance centerlines, faucet hole locations, finished edges, and overhangs. All appliances, sinks, cooktops, and any item that requires a countertop cutout should be on site when the job is templated.

INFORMATION TO GATHER FROM HOMEOWNER

- Choice of Crescent Quartz material
- Name of Crescent Quartz slab selection
- Seam locations, if needed
- Edge profile
- Backsplash
- Sink location
- Faucet location
- Appliance locations (cooktop/range, refrigerator, dishwasher)
- Additional items (soap dispenser, sprayer)
- Inside corners (see note below)

> **Inside corners:** Crescent Quartz requires inside corners to have a 3/8” minimum radius. To achieve this, fabricators must use a 3/4” bit.

CABINET REQUIREMENTS

Make sure the cabinets are finished and installed properly, and verify that all cabinets are level. The top of the cabinets must be true and flat, with no more than a 1/16” slope over an 18” span. Cabinets must be joined to each other and secured to the wall. Properly support all cutouts and seams, and provide extra structural support around the dishwasher.

Build the Right Support

ADDITIONAL SUPPORT REQUIREMENTS

Structures supported on four (4) sides

No additional support is required for 2cm material if the countertop depth is less than 26” and the countertop length is less than 118”. If either dimension is exceeded, support is required every 36”.

Structures supported on three (3) sides

This includes dishwashers, frameless cabinets, desks, and Lazy Susans. 2cm material on these structures needs additional support every 24”.



DESIGN INSPIRATION

Support Every Overhang

OVERHANG/CANTILEVER REQUIREMENTS

- Overhangs cannot exceed 1/3 of the countertop depth; minimum length is 16” (2cm) or 20” (3cm).
- 2cm material requires support every 16”; 3cm material requires support every 20”.
- Two-thirds of the width/length of the material must be supported; one-third can be unsupported (an overhang).
- No cutouts or cored holes are permitted on any overhangs.
- Additional support (e.g., support bars or 5/8” plywood) may need to be added to meet span requirements.
- Overhangs that exceed cantilever rules need columns, corbels, or legs, as follows:

OVERHANG	NO SUPPORT NEEDED	CORBELS REQUIRED	COLUMNS REQUIRED
2cm material	< 8”	> 8”	> 16”
3cm material	< 10”	> 10”	> 20”

- Corbels should always be mounted to a stud for proper support of the material.

RECOMMENDED SUPPORT MATERIAL FOR CABINETS

- Plywood, wood, medium-density fiberboard, and structural steel are the recommended support materials for cabinets that need additional support for Crescent Quartz.
- Materials that are not moisture resistant, like oriented strand board and particle board, are not acceptable as support material.

> Take the above information into consideration during templating and layout/measuring to prevent problems during fabrication and installation. **Not following the procedures in this guide voids any warranty provided by Crescent Quartz.**

Plan Before Cutting

LAYOUT

Before cutting Crescent Quartz slabs, calculate the square footage, length, and width of material needed to complete the project. This is especially important because each batch and slab is unique and has specific shades that must be used for each job. Inaccurate measurements may create color-match concerns, and you may need to order more material.

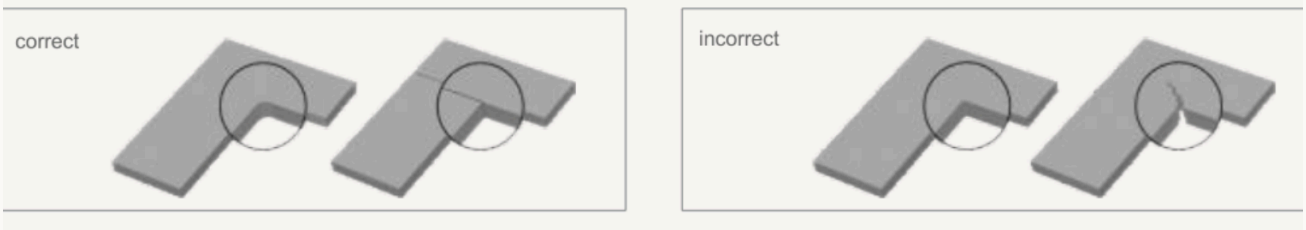
Thoroughly inspect the slab for color, pattern, and defects. Do not use material with visible manufacturing defects unless the layout/job allows you to work around them.

DETERMINE SEAM LOCATIONS

During layout, determine all seam locations to ensure optimal aesthetics for the material and the kitchen. Seams should never be placed:

- Through the center of the sink cutout.
- In places where there is direct sunlight.
- Above dishwashers.

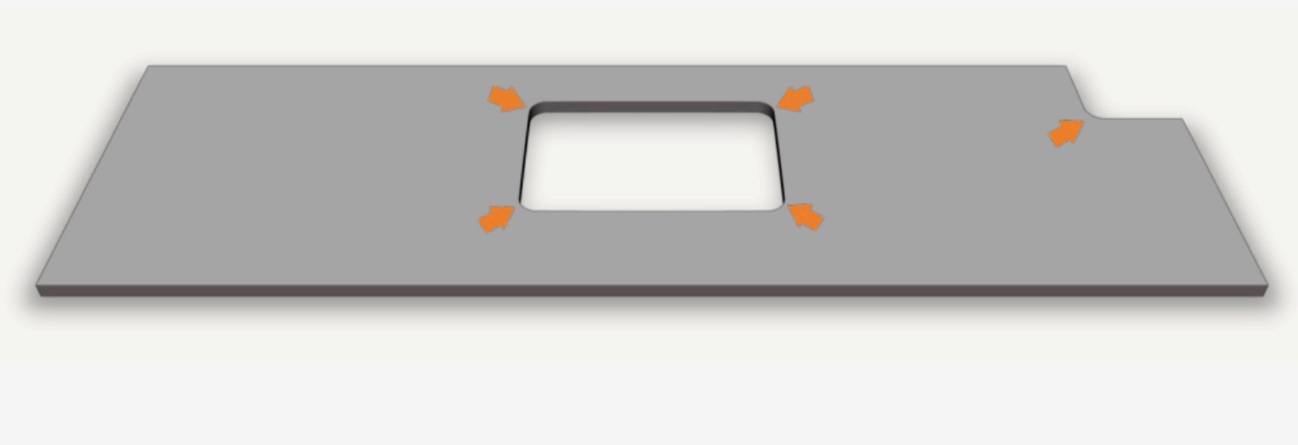
> If a mitered edge is used on an L-shaped countertop, eliminating the 3/8" minimum inside radius, a field deck seam is required, as shown below.



Make Every Cut Count

PROPER CUTTING

- All equipment used to cut Crescent Quartz should be kept cool with a sufficient amount of water. **Always avoid excessive heat with all diamond-cutting tools.**
- Make the first cut along the largest part of the slab, then proceed to the shortest.
- When using a bridge saw, never plunge cut.
- **Never cut inside square corners.** This creates stress points in the countertop and can result in cracking. Always use radii.
- Inside corners fabricated on a single slab must have a minimum radius of 3/8”.



- **Never crosscut.** Always use a diamond core bit to create your radius on inside corners; any internal angled corner must have a radius.
- Crescent Quartz slabs contain resin, which can cause warping or bowing depending on weather and storage conditions. If bowing or warping is present, cutting the slab into parts will release the tension and flatten the pieces.

Shape the Openings

CUTOUTS

Cutouts can be made with several types of equipment. A bridge saw can handle straight cuts, but radii need to be cored with diamond core bits, with no crosscutting. The same rules apply to CNC machines. A waterjet can also be used with the proper abrasives and water pressure.

- L- or U-shaped countertops with inside corners should always be fabricated from a single slab and must have a minimum 3/8" radius. The larger the radius, the stronger the corner.
- If the distance between the cutout and the seam is less than 6", the seam needs to be supported. During layout, ensure all seams fall on a cross member of the base cabinet; otherwise, add cross members.
- Internal cutouts on all inside corners should have a 3/8" radius at minimum.
- Cutouts for drop-in sinks, cooktops, outlets, slide-in stoves, etc. should include an extra 1/8" from the edge to allow for expansion.
- Cutouts range from simple core holes for faucets and soap dispensers to complex cutouts for specialized equipment. Have all equipment on the job site during installation; this is the safest way to determine the shape and size of the core or cutout.
- Always refer to the manufacturer's recommendations when available.
- The customer should make the final decision on the location and size of each cutout and sign off on it.
- Add support to both ends of the cutout if the base cabinet cross bars are not within 3" of the cutout.

> **All hot cutouts (e.g., cooktops) require 9-mil aluminum foil tape (heat tape)** to prevent the transfer of heat to Crescent Quartz. Always follow the manufacturer's guidelines.

Craft the Edge

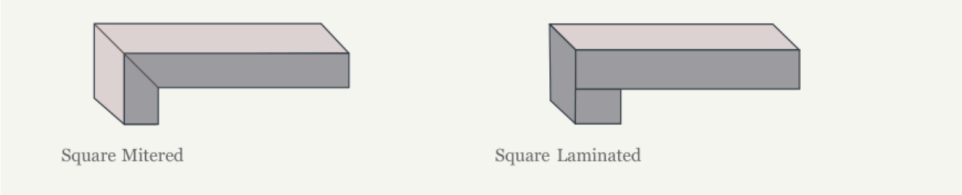
LAMINATIONS

The lamination piece should be the full length of the top piece, with corners cut at 45 degrees. If you must join two laminated pieces, cut the joint at a 45-degree angle; a mitered end cut reduces stress that can cause fractures.

Cut the lamination strip from the same slab as the countertop surface to ensure a color match, and add the lamination piece size to your cutting measurements so the strip is the correct length and color.

- Use full-length lamination pieces if possible.
- For long countertop runs where a joint is required, make the joint in the laminated piece at 45 degrees to minimize stress points.
- When clamping and gluing miter joints, we recommend Mitsubishi G-Tape or a tape with similar properties. For standard 1 ½" mitered edges, apply tape every 8"–10" before gluing. Taller profiles (3"–8") need tape more frequently to support the weight of the apron.
- If mechanical clamps or jigs are used, uneven or excessive clamp pressure can introduce warpage into the finished product.

MITERED AND BUTT JOINTS



Butt joints (square laminated) are not recommended, as they interrupt the pattern at the lamination joint.

A mitered edge creates a clean 90-degree corner by joining two pieces of Crescent Quartz, each cut at 45 degrees, typically with 2cm material. The longer the apron, the harder the seam is to hide. A mitered edge over 4" is never recommended unless special support is added.

Refine the Finish

POLISHING/EDGE DETAIL

Selecting the right polishing pads is very important. **Do not use polishing pads with colored resin.** While they work well with granite, they require excessive water and can transfer the resin's color to the edges of Crescent Quartz. Use only white resin pads for all applications, whether hand polishing or using an automatic edge polisher or CNC machine.

- **Backer pads:** Flexible backers work well for concave profiles such as ogee edges; most other profiles don't need one. Automatic edge machines use extremely rigid tools and backer pads and produce a far better edge than most hand work.
- **Polishing pads:** Common problems include using too much or too little water and improper technique. The grit sequence on page 09 is a guideline for achieving a polish equal to the factory finish.
- **Too much water:** with pressure on the center of the pad, water gets trapped between pad and stone, causing hydroplaning. Water escapes to the pad's outer edges and the result is a spotty polish.
- **Too little water:** pads tend to flex or cup outward (mainly at higher grits), so only the outer edges touch the surface. Added pressure to compensate also leaves a spotty polish.
- Use the entire pad surface when polishing edge detail (see the tips on page 20). For any bullnose edge, use only the center of the pad, which gives proper water distribution.
- **Never use a final buffing pad.** These black and buff pads contain different chemicals, have no diamonds, and are meant for granite. The final step for Crescent Quartz is a 3000-grit pad.
- **Never use dry polishing pads.** Dry polishing can overheat the edge, altering the slab's physical properties and causing micro-fissures not visible to the naked eye, which lead to chipping, discoloration, and an uneven polish.

Polish with Precision

POLISHING THE TOP EDGE OF THE MITER AFTER GLUING

Begin with a 400 polishing pad, applying very light pressure on the tool. Repeat with a 600 pad, again with very light pressure. Fabricators who routinely work with porcelain or sintered stone typically exert much more pressure because of those materials' extreme hardness. Following this process, the line at the transition from top surface to edge will be much less visible than on porcelain or sintered stone.

> **Crescent Quartz should never be polished on the top surface of the manufacturing finish.**

POLISHING TIPS

Use the proper amount of water. Pads with grit levels of 50–400 have a higher concentration of diamonds and need less water; a trickle from your center water feed is sufficient. Higher 800–1,500 grit pads have less diamond content and need more water. Proper water flow lets the pads work faster.

Polish in a circular motion, using the edges of the pad as it rotates from the top half of the edge to the bottom half as it moves down the piece. You will feel resistance at each grit level; that is the diamonds polishing. Let the diamonds do the work. When you no longer feel resistance, change to the next grit, and repeat until you reach the final grit.

AIR/ELECTRIC POLISHER RPM

Air/electric polishers should run between 2,800 and 4,000 rpm. Start at 2,800 rpm and increase as needed. Anything over 4,000 rpm can burn or smear the resin on your edge detail.

This is where pad resin color matters. An edge burned with a white resin pad can easily be cleaned with denatured alcohol, but the dye in colored resin pads can cause major problems on light-colored Crescent Quartz.

Install with Care

INSTALLATION

Cabinets must be leveled, and shimmed where necessary, to 1/16” tolerances before final countertop installation. Check all cabinets for level.

- After the support system is installed and leveled, installation can begin. Measure the cabinets and verify that the pieces will fit before placing the Crescent Quartz on the countertop.
- Bring the pieces in one at a time and test fit them in their proper place. Adjust as necessary for a good fit and proper alignment. Always make any necessary cuts outside, cutting wet to control dust.
- Allow space for expansion: each countertop requires at least 1/8” at each wall for expansion and contraction. Fill the gap between the wall and countertop with silicone.
- Attach the tops to the cabinets and support strips with 100 percent silicone caulk, applied about every 8”–12” around the cabinet perimeter and at the cross supports.
- Use extra silicone on all corners and joints, and around all cutouts.

> **Do not use epoxy adhesive, acrylic adhesive, or Liquid Nails to attach tops.** Silicone allows the top to expand and contract as needed.



DESIGN INSPIRATION / CALACATTA OMBRE

Bring the Seams Together

SEAMS

- Seam tolerance is generally the same for all hard-surface countertop material. The recommended seam width is 1/16”, with a tolerance of +/- 1/32”. Both pieces should be level across a seam within +/- 1/32”; one side may be slightly raised or slightly lowered, but not both.
- The two edges to be seamed must be cut straight and true. If you use a waterjet, grind the edges flat to remove any grooves from cutting.
- Test fit to make sure the two pieces form a tight, level, uniform seam before applying adhesive. Shim and level if required, and check that color and vein pattern match across the seam.
- Clean the joined edges with denatured alcohol and wipe with a white cloth. Apply tape to the top and underside of both pieces, leaving about 1/4” between them, to keep adhesive out of the cabinets and make cleanup easy.

> **Tip:** If possible, use a pneumatic seam setter with a vacuum and posts/pins to level the pieces and make seams as tight and inconspicuous as possible. Seams should never be more than 1/16” wide.

ADHESIVE

- Seams should be made using a pre-mixed cartridge adhesive, either acrylic or a two-part epoxy system.
- Insert the cartridge in the seaming gun with a fresh, disposable mixing tip. Always purge the adhesive (generally the length of the tip) so adhesive and hardener are properly mixed before seaming. Replace the tip after each use, or the remaining adhesive will cure in it.

Remove the used tip and replace the original cap for an airtight seal. Acrylics typically cure in about 15–20 minutes at 70°F; work time decreases in hot weather and increases in cold weather. Two-part epoxy systems can take 2–6 hours to cure.

Support the Sink

SINKS

Follow the sink manufacturer's guidelines when installing all sinks, whether top mount or undermount.

- All sink installations should be fully structurally supported, without relying on the Crescent Quartz as a form of support.
- For undermount sinks, follow the minimum edge profile recommendations around the cutout to prevent chipping. Use fasteners or clips along with silicone.
- All sinks must be sealed to the countertop using 100 percent silicone.
- Some sinks may require support systems like cradles, rail systems, and sink setters.

> **Never affix mechanical fasteners (screws, nails, etc.) directly to Crescent Quartz.** They will rust when exposed to moisture, and the rust will bleed through the stone.



DESIGN INSPIRATION / CALACATTA NOVA

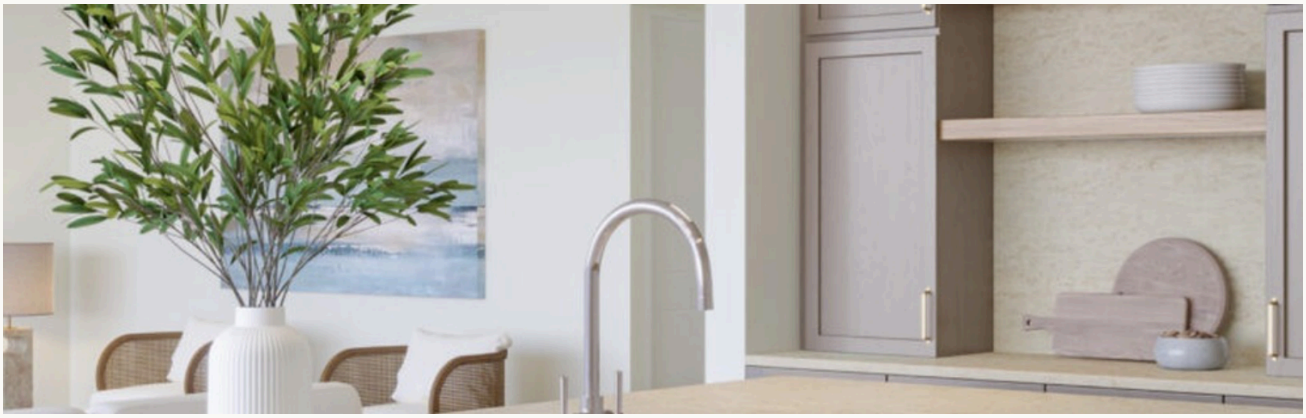
Care for the Surface

REGULAR CLEANING

To preserve the surface and maintain its original luster, regular cleaning is essential. Use a few drops of a neutral cleaner or mild dishwashing liquid, and gently wipe the surface with a cloth dipped in warm water. Rinse thoroughly, then dry the surface.

TO HELP PRESERVE YOUR CRESCENT QUARTZ OUTDOOR SURFACES

- Shield the surface from prolonged direct sunlight with a sunshade cloth.
- Use protective pads to prevent direct contact with overheated tableware.
- Avoid prolonged contact with acidic or alkaline substances.
- Clean up red wine and other staining substances promptly.
- Install ovens at a distance from Crescent Quartz outdoor surfaces.



DESIGN INSPIRATION / ROMA TRAV

Manufacturer Test Report

Original manufacturer report reproduced from the supplied guide.

SGS

TEST REPORT

No. : XMIN2112013857SC
Date : Jan 07, 2022
Page: 1 of 8

Sample Name	:	SYNTECK ARTIFICIAL MARBLE

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

****

SGS Ref. No.	:	XMIN2112013749CM
Date of Receipt	:	Dec 20, 2021
Testing Start Date	:	Dec 20, 2021
Testing End Date	:	Dec 30, 2021
Test result(s)	:	For further details, please refer to the following page(s) (Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical Services Co., Ltd Xiamen Branch
Testing Center

Jude

Jude Zhao
Authorized signatory