

— FABRICATION & INSTALLATION MANUAL

For *fabricators,* *installers & trade.*

This manual outlines professional fabrication and installation guidelines for **Viana Sintered Stone** slabs. Sintered stone is a high-hardness (Mohs 7–8) fully vitrified material that requires specialized tooling and technique different from engineered quartz. These guidelines apply to all qualified stone fabricators and installers. Adherence to these procedures is required to maintain the Viana product warranty and ensure long-term performance.

Note: This document assumes familiarity with standard stone fabrication practices, safety protocols, and shop equipment. All work must comply with local codes and OSHA / HSE requirements. Wet-cutting is mandatory for all sintered stone fabrication due to respirable crystalline silica exposure.

— 01 · RECEIVING & STORAGE

On delivery.

Inspect each slab on delivery for transit damage — chips, cracks, or surface defects. Document any damage with photographs before signing the delivery receipt. Contact Viana within 48 hours for any damage claim.

Storage requirements:

- Store slabs vertically on A-frames or approved slab racks
- Maintain slab spacing of at least 2 inches between slabs using rubber or foam spacers
- Indoor or outdoor storage acceptable — Viana Sintered Stone is UV-stable and weatherproof
- Keep storage area clean and free of dust, debris, and chemical contamination
- Never stack slabs horizontally — risk of cracking from weight load
- Sintered stone slabs are heavier than quartz of equivalent size — verify rack capacity

— 02 · HANDLING & LIFTING

Safe slab movement.

Viana Sintered Stone slabs are heavy — a full 127 × 63 inch slab in 20mm weighs approximately 550–750 pounds. Proper lifting equipment is essential for safety and slab integrity. Sintered stone's brittleness under dynamic load requires greater care than quartz.

Required handling equipment:

- Vacuum lifters rated for the specific slab weight and dimensions
- Forklift or crane for larger slabs with appropriate slab clamps

- Minimum 2 qualified personnel for any manual handling
- Steel-toed safety boots, cut-resistant gloves, safety glasses
- Hard hat when working under suspended loads

Transport slabs vertically, never flat. Flat transport of sintered stone greatly increases risk of cracking under dynamic loads.

— 03 · CUTTING & FABRICATION

Required tooling & technique.

All cutting, profiling, and drilling of Viana Sintered Stone must be performed using **diamond-edge wet tooling rated for porcelain and high-hardness ceramics**. Due to Mohs 7–8 hardness, sintered stone requires more aggressive tooling and slower feed rates than engineered quartz. Dry cutting is strictly prohibited.

Recommended tooling:

Straight cuts	Bridge saw with continuous-rim diamond blade rated for porcelain/sintered stone, wet cut only
Curved cuts & shapes	CNC router or waterjet with diamond tooling — waterjet preferred for complex shapes
Edge profiling	CNC router with high-density diamond bits, slow feed rate
Sink & faucet holes	Diamond core bits rated for porcelain, wet cut, pre-drill pilot hole
Mitered edges	CNC router with 45° profile at reduced feed rate; dry-fit before bonding
Surface polishing	Diamond polishing pads, grits progressing from 50 to 3000

Critical cutting guidelines:

- Always use a continuous water supply during cutting — prevents overheating and silica dust
- Feed rates 30–50% slower than equivalent quartz work to avoid chipping and blade wear
- Support the slab fully during cutting — avoid stress fractures from unsupported ends
- Use a sacrificial backing material for intricate cuts to prevent chipping on the exit side
- Always pre-drill a pilot hole before any cutout — never start a cut with a diamond blade on an interior point
- For corner cutouts (e.g., sinks): use a minimum 10mm radius — sharp internal corners are stress risers and will crack
- Replace diamond tooling more frequently than with quartz due to higher material hardness
- Monitor blade temperature and water flow — dry sections cause instant blade glazing on sintered stone

— 04 · THICKNESS SELECTION

Specify by application.

Viana Sintered Stone is available in three thicknesses, each suited to specific applications:

6mm (¼")	Wall cladding, full-slab backsplashes, furniture inlays, lightweight applications. Not suitable for horizontal countertops or load-bearing use.
12mm (½")	Standard for countertops, bathroom vanities, shower walls, fireplace surrounds, vertical installations. Most common specification.
20mm (¾")	Kitchen islands with waterfall edges, long-span overhangs, outdoor kitchens, flooring, exterior cladding, commercial installations, high-load applications.

— 05 · EDGE PROFILES

Standard edges.

Viana Sintered Stone supports a range of edge profiles. Contemporary profiles (eased, straight, mitered) are most commonly specified. Traditional profiles (bullnose, ogee) are achievable with appropriate CNC tooling and slower feed rates.

Eased edge	Clean 90° corner with slight radius — contemporary standard. Recommended for all thicknesses.
Straight edge	Full 90° corner. Used for minimal modern designs — typically 20mm slab.
Mitered edge	Two pieces joined at 45° to create built-up visual thickness. Popular for waterfall edges creating 4cm, 6cm, or 8cm visual depth.
Bullnose	Traditional rounded edge. Achievable but less common with modern sintered stone designs.
Bush-hammered	Textured slip-resistant edge for outdoor and commercial applications.

— 06 · SEAMING

Joining slabs.

Seams are joined with **color-matched epoxy adhesive** formulated for porcelain and sintered stone. Proper seaming is critical — poor seams are the most common installation failure. Sintered stone seams can be made nearly invisible when bookmatched correctly.

Seaming procedure:

- Dry-fit both slab edges to ensure they meet cleanly with no gap
- Clean both edges with isopropyl alcohol to remove dust, oils, and residue
- Apply color-matched epoxy (specifically formulated for sintered stone / porcelain) to both edges evenly
- Bring slabs together under consistent pressure using seam pullers or clamps
- Maintain pressure until epoxy fully cures (typically 30–45 minutes for sintered stone)
- Remove excess epoxy with a razor scraper while still soft — never grind after full cure
- Polish the seam lightly to match the surrounding surface finish

Seam placement guidelines:

- Place seams away from stress concentration points (sink cutouts, cooktop edges)
- For bookmatched slabs, align veining carefully — dry-fit and mark alignment before bonding
- Avoid seams directly adjacent to cutouts (minimum 6 inches from sink, cooktop, or other penetrations)
- Target seam width: less than 1/16 inch (1.5mm) for a professional-quality join
- For outdoor installations, use weatherproof epoxy rated for UV and freeze-thaw

— 07 · INSTALLATION ON CABINETS

Support & leveling.

Before installation, confirm:

- Cabinets are level across the entire run (tolerance: 1/8 inch over 10 feet)
- Cabinet boxes are structurally sound and plumbed properly
- Cabinet reinforcement may be required — sintered stone is heavier than quartz
- Any shimming required is completed before slab placement
- Electrical, plumbing, and gas rough-in is complete and verified

Overhang support requirements:

12mm (½") Sintered Stone	Unsupported overhang: up to 8" (203mm)
20mm (¾") Sintered Stone	Unsupported overhang: up to 12" (305mm)

Beyond these limits

Requires steel brackets, corbels, or knee-wall support — engineered per load

Waterfall edges

Bond with epoxy at miter; support vertical panel along full cabinet edge

Adhering slabs to cabinets:

- Use 100% silicone adhesive — continuous beads on cabinet tops along all edges
- Never use construction adhesive (PL400, Liquid Nails) — can discolor or damage the slab
- Place the slab, check level in both directions, adjust before silicone cures
- Allow for minor thermal expansion — particularly important for outdoor installations

— 08 · OUTDOOR INSTALLATION

Exterior-rated specification.

Viana Sintered Stone is one of the only premium architectural surfaces rated for outdoor use. UV Class A+ stability, freeze-thaw resistance, and zero water absorption make it suitable for outdoor kitchens, pool surrounds, patios, and exterior cladding in any climate.

Outdoor installation requirements:

- Use UV-stable, weatherproof epoxy for all seams
- Silicone joints rated for outdoor temperature range (-40°C to +80°C)
- Allow for thermal expansion — 6mm per 3m (¼" per 10 feet) movement joints recommended
- For pool/saltwater installations, use marine-grade stainless steel fixings
- Drainage: ensure surfaces slope minimum 2% for water runoff
- Consider textured finish (bush-hammered, riven) for slip resistance in wet areas

— 09 · EXTERIOR CLADDING & FAÇADES

Ventilated façade systems.

Viana Sintered Stone is specified for ventilated façade (rainscreen) cladding systems on residential, commercial, and high-rise projects. Standard 6mm and 12mm thicknesses are appropriate for adhered and mechanically-fixed systems respectively.

Cladding system types:

- **Adhered systems:** 6mm slabs bonded to insulated substrate — suitable for residential and low-rise commercial
- **Mechanical fixing:** 12mm slabs with stainless steel back-anchors and support clips — required for high-rise and high-wind applications
- **Undercut anchor systems:** For prestige commercial façades with concealed fixings

For specific engineering calculations, wind load analysis, and approved mounting system specifications, contact Viana's technical team.

— 10 · FINAL INSPECTION & HANDOFF

Before client walkthrough.

Complete pre-handoff inspection:

- Verify all seams are tight, polished, and color-matched
- Check all edges for chips, cracks, or tool marks — touch up as needed
- Confirm faucet, sink, and cooktop openings are clean with smooth edges
- Seal perimeter gaps with color-matched silicone
- Clean the entire surface with soap and water

- Provide customer with Viana Care & Maintenance Guide
- Record final installation photos for your records and Viana warranty validation

— 11 · SAFETY REQUIREMENTS

Shop & job-site protocols.

Respirable crystalline silica (RCS) is generated during any dry cutting, grinding, or polishing of sintered stone. Sintered stone contains higher crystalline silica content than many other stones — RCS exposure control is mandatory. Compliance with OSHA 29 CFR 1926.1153 (construction) or 29 CFR 1910.1053 (general industry) is required.

Required controls:

- **Always wet-cut** — dry cutting is prohibited and voids the Viana warranty
- Continuous water suppression during all cutting and grinding operations
- Local exhaust ventilation (LEV) at all fabrication stations
- NIOSH-approved respirators (minimum N95, often P100) as required by exposure assessment
- Written exposure control plan on file, reviewed annually
- Medical surveillance and respiratory fit testing for all affected workers
- Shop cleaning protocols that prevent dry accumulation of silica dust

Refer to the product-specific Safety Data Sheet for complete hazard information.

— 12 · WARRANTY & SUPPORT

Viana's 15-year comprehensive warranty on Sintered Stone is conditional on installation by a qualified fabricator following the procedures in this manual. Improper fabrication, improper handling, dry cutting, or non-approved adhesives void the warranty. Outdoor residential applications are covered. For commercial applications, exterior cladding, and project-specific support, contact Viana Surfaces directly at vianasurfaces.com.