

Limestone Line



Limestone

Installation manual

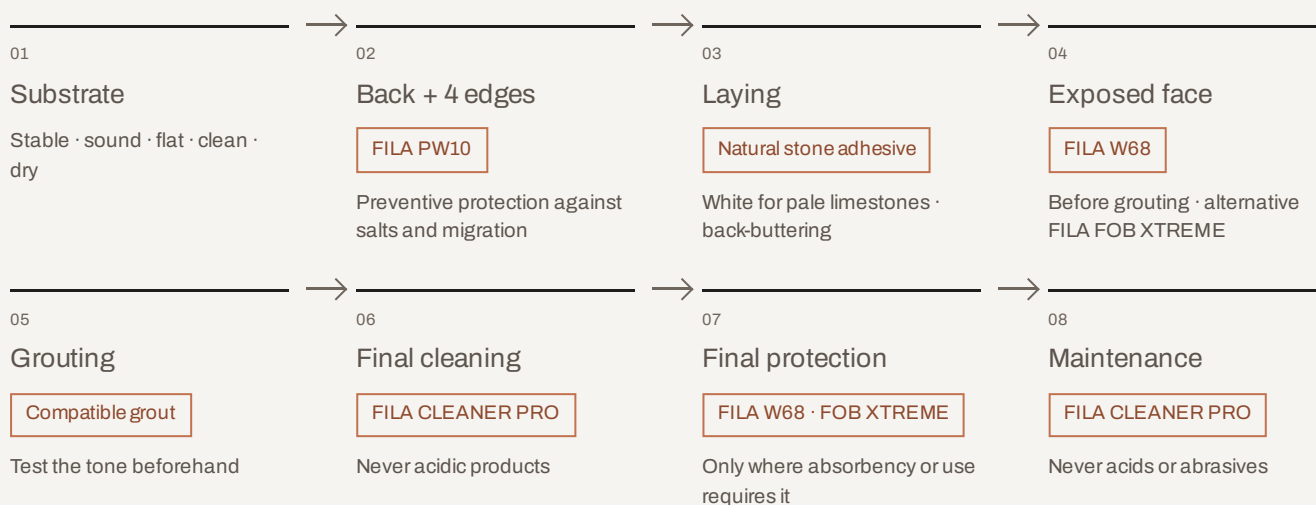
Technical data sheets and the Line's remaining documentation:

formmadesign.com/documentacion/limestone

Natural stone is a unique material. Variations in tone, grain, texture, pores and fossils derive from its geological formation and are part of its character.

Correct installation respects the characteristics of the stone, the condition of the substrate and the intended use of the surface.

01 — FORMMA INSTALLATION SYSTEM



Two rules that admit no exception: protectors do not replace waterproofing of the substrate, and limestone is never cleaned with acidic products.

02 — PRIOR INSPECTION

Check the integrity, dimensions, thickness, finish and general appearance of the pieces.

Residual moisture from cutting and fabrication can temporarily alter the tone: unpack and leave to dry completely in a ventilated space, on a flat surface, protecting edges and corners.

Do not install pieces with unacceptable visible defects. Installing a piece constitutes acceptance of it.

03 — DRY LAYOUT

Lay the pieces out dry, opening material from several boxes or pallets at once, to achieve a balanced composition.

On stones with a pronounced visual direction, agree the orientation beforehand.

04 — SUBSTRATE

Requirements	Stable, sound, flat, clean, dry and suitable to receive natural stone.
Cleanliness	Free from dust, oils, paint, release agents, site debris or anything that would impair adhesion.
Condition	Shrinkage and drying complete; moisture compatible with the laying system.
Joints	Maintain structural joints and allow for perimeter and movement joints.
External	Falls and water drainage resolved.

In showers and areas of direct water contact, a waterproofing system beneath the stone. Limestone's protective treatments do not replace waterproofing of the substrate.

05 — PRIOR PROTECTION OF THE BACK

Product	FILA PW10
Where	Five faces: the back and four edges, with the stone clean and dry, without build-up.
Why	It protects against salts, efflorescence and contaminants migrating from the substrate or the laying system.
When	Recommended on pale limestones. Necessary where there is a risk of moisture, salts, efflorescence or migration, outdoors and in wet areas.
Observe the drying time stated by FILA before laying.	

PW10 does not replace the protector for the exposed face.

06 — BONDING

Adhesive	Suitable for natural stone and compatible with the limestone, the substrate, the format, the thickness and the use. White for pale limestones, to avoid altering the colour.
Method	Back-buttering: adhesive combed onto the substrate with a notched trowel and a thin, continuous layer across the whole back of the piece.
Bedding	Press and slide the piece slightly until the adhesive is spread and voids are minimised.
Do not correct significant irregularities in the substrate with excessive	

thicknesses of adhesive. The final choice of adhesive follows its manufacturer's instructions.

07 — JOINTS

Joint	Appropriate to the format, the tolerances, the substrate and the use. Butt jointing is not recommended.
Structural	Carry them through into the finish.
Perimeter and movement	Maintain those allowed for in the project, without filling them with rigid material.

08 — PROTECTING THE EXPOSED FACE

Once the adhesive has cured, apply the protector for the first time before grouting: it reduces absorbency and makes grout residues easier to remove.

Recommended by Formma	FILA W68. Water-based water- and oil-repellent protector for unpolished natural stone, interior and external.
Alternative	FILA FOB XTREME. Greater penetration, breathable and film-free. As it is solvent-based, use it where the performance justifies it against the environmental case for W68.

Always test the protector on a sample or in an inconspicuous area.

09 — GROUTING

Grout once the adhesive and the prior protector allow, with a material compatible with natural stone.

Check beforehand that the product and its pigments do not alter the tone or penetrate the stone. Apply diagonally across the joints and remove the excess before it hardens, with clean water and tools that will not scratch.

Do not use acidic products to remove cement or grout residues.

10 — FINAL SITE CLEANING

Product	FILA CLEANER PRO, at the dilution and following the procedure and times in its current technical data sheet.
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If the finish and the soiling call for more intensive cleaning, another FILA product compatible with that finish, tested beforehand. Rinse and remove all residues.

Never acidic products, vinegar, conventional limescale removers or acidic descalers.

11 — FINAL PROTECTION

With the stone clean and dry, check the protection. If absorbency, use or the system requires it, top up with the same protector applied before grouting: FILA W68 or FILA FOB XTREME.

The number of applications and the times depend on the protector, the absorbency of the stone and the use.

Do not add more product if the surface is already protected, and do not leave unabsorbed build-up.

12 — COMMISSIONING

Observe the drying, curing and commissioning times for the adhesive, the grout and the protector. Protect the surface for the remainder of the works and do not cover it with impermeable materials while it still holds residual moisture.

13 — MAINTENANCE

Product	FILA CLEANER PRO or a cleaner specifically for calcareous natural stone.
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Remove stains as soon as possible. Check the protection periodically and renew it when use requires.

W68 and FOB XTREME reduce absorbency, but they do not make limestone resistant to acids. Never acids, vinegar, limescale removers, descalers or abrasive products.

14 — IMPORTANT

These recommendations are general. The substrate, format, thickness, location, exposure to water, climate, waterproofing and underfloor heating must be assessed by those technically responsible for each project.

Adhesives, grouts, cleaners and protectors are used in accordance with their current technical data sheets, with a prior compatibility test on a sample or in an inconspicuous area.