

Porcelain stoneware

Installation and maintenance



MANUAL 01

Before you begin

A guide for designers, installers and maintenance managers. From substrate checks to handover: decisions that protect the surface and the quality of installation.

How to use this guide

Read the intended uses first, then check the substrate, materials and layout. The diagrams show the steps to check on site; the chosen system's instructions determine dimensions and timings.

CONTENTS

01	Choosing the surface	3
02	Receiving and preparing	4
03	Checking the substrate	5
04	Grout and movement joints	6
05	Choosing adhesive and grout	8
06	Achieving continuous bonding	9
07	Grouting and handover	11
08	Long-term maintenance	12

Choosing the surface

The finish and environment come before the adhesive. Check the series, product code and intended use before work begins.

PRODUCT AND FINISH	NOEMA INTENDED USE
Brera Matt, Lythos Naturale, Cromatica Naturale R10 B	Indoor floors and walls
Grip versions listed in the catalogue R11 and A+B+C	Indoor and outdoor floors and walls, within the designed system
Kairos Matt and Honed	Indoor floors and walls. Honed has different requirements from Matt
Decorative tiles across all series	Indoor walls. Opus is the only decorative tile also permitted on indoor floors

Slip classifications do not grant universal suitability for every environment. Assess water, contaminants, footwear, slopes and local requirements. DCOF compliance is not declared for Kairos Honed, Opus or other decorative tiles. The values for Matt field tiles do not apply to these finishes.

Scope of this manual

This guide covers bonded ceramic tile installation. Ventilated façades, raised or dry installation, continuous immersion and special applications require dedicated instructions. Indoor wall use alone does not establish suitability for showers, pools or steam rooms.

Before installation, the designer specifies the substrate, build-up, falls, waterproofing, adhesive, grout joints and movement joints. The installer checks that the design, delivered materials and actual conditions agree.

Receiving and preparing

A check before installation prevents supply or layout errors from becoming part of the floor.

Checking the delivery

Compare the order, codes, size, finish, shade and calibre shown on the packaging. Check quantities, edge integrity and flatness appropriate to the product. Keep batch labels and photographs. If visible defects or discrepancies appear, set aside the affected material and resolve the supply issue before installation.

Dry laying

Open several boxes from the same compatible batch and distribute the graphic variation over a sample area. Agree on direction, alignment, perimeter cuts and junctions with thresholds and furniture. Follow the series-specific layout for rectangular tiles and decorative tiles; do not impose a universal offset.

Handling and cutting

Place material on clean, stable surfaces. Use lifting and supporting equipment suited to its weight, dimensions and finish; check suction-cup grip on textured surfaces. Control cutting dust by wet cutting or suitable extraction and use the PPE required by the risk assessment. Do not remove dust with compressed air.

Drill and cut using porcelain tile tools and continuous support. Avoid sharp internal corners in L-shaped cuts: provide drilled corner relief appropriate to the design. Do not force tiles onto uneven supports.



Image from the Brera catalogue

Checking the substrate

The covering follows the behaviour of its substrate. Adhesive cannot correct an unstable screed or an incorrect slope.

SUBSTRATE	CHECKS AND PREPARATION
Cement screed	Curing, residual moisture, cohesion, cracks and flatness. Remove dust and friable material. Repair according to the diagnosis.
Anhydrite or gypsum	Measure moisture using the method required by the system. Use compatible surface preparation and primers; protect from water where necessary.
Existing tiles	Check adhesion and stability. Remove wax, contaminants and loose areas. Prepare and prime according to the adhesive and substrate.
Boards and lightweight walls	Check deflection, fixings, joints and permissible load, including the weight of the complete build-up.
Underfloor heating	Record the initial heating cycle specified for the screed and measure moisture. Follow the chosen system's installation and restart conditions.

Measure before deciding

Record the method, measured value and limit required by the screed or adhesive manufacturer. Days elapsed since screeding are no substitute for measurement. Rapid, conventional and calcium sulphate screeds have different requirements.

Water and discontinuities

In areas exposed to water, design waterproofing, junctions, drains and falls. Tiles and grout do not replace waterproofing. Diagnose cracks before repairing them; an uncoupling membrane does not permit structural joints to be ignored.

Grout and movement joints

Grout joints separate tiles. Movement joints accommodate movement in the system. Their functions and materials differ.

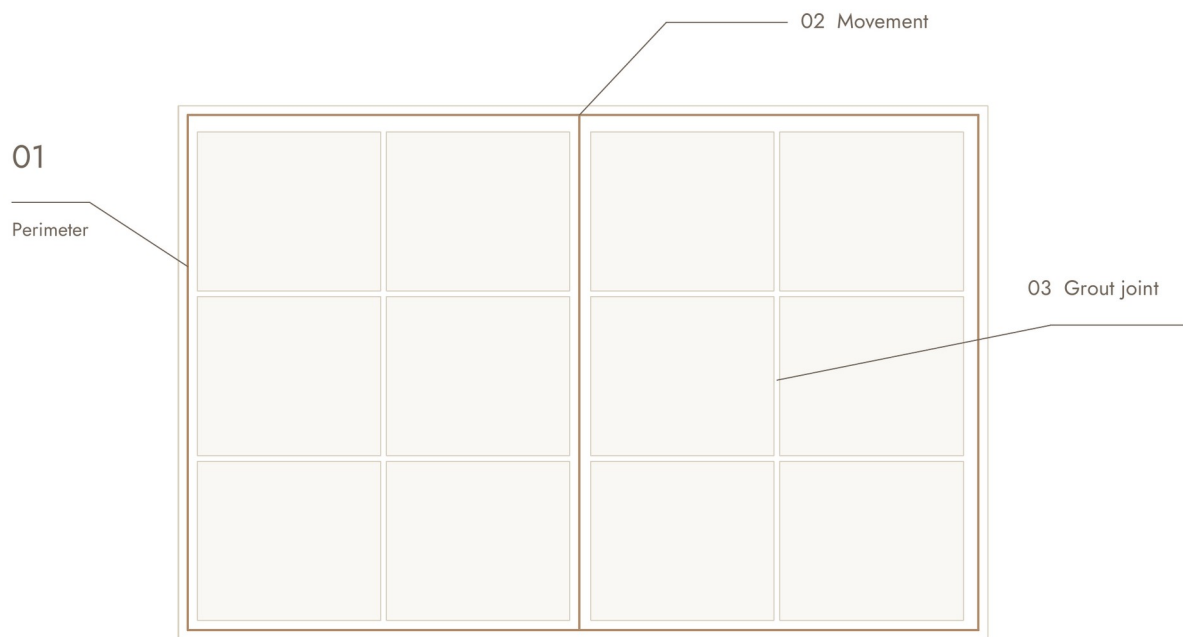
ELEMENT	HOW TO TREAT IT
Grout joint between tiles	Specify the width according to tile size, tolerances, environment and design. It must meet applicable site requirements and the selected product's limits; record it in the sample and layout drawing.
Perimeter joint	Leave the specified space along walls, columns and fixed elements. Do not fill it with adhesive or rigid grout; skirting must not restrain the floor.
Intermediate movement joint	Divide tiled areas according to geometry, exposure, heating and build-up. No single grid size in m ² applies to every project.
Structural joint	Continue the substrate discontinuity through the covering system. Do not bridge it with tiles or rigid filling.

Butt-joint installation is not permitted. Use compatible sealant and backing rod for elastic joints; the geometry must allow movement and adhesion to the sides, avoiding adhesion to the base where required by the system. Size joints with the designer and sealant manufacturer.

DIAGRAM 01

Joint geometry

Each discontinuity has a precise function. The tiled area and substrate are designed together.



PLAN OF THE TILED AREA

01 Perimeter

The space along walls and fixed elements remains free from adhesive and rigid grout.

02 Movement

Intermediate and structural joints follow the design. Do not bridge a structural joint with rigid elements.

03 Grout joint

The space between tiles receives grout. It does not replace an elastic joint.

Conceptual diagram, not to scale. The plan does not prescribe a universal grid or width.

Choosing adhesive and grout

Choose a system suited to the site, with current technical data sheets and working times compatible with the team.

Adhesive

Selection depends on substrate, tile size and backing, temperature, moisture, use and expected movement. C, D and R identify different adhesive families; S1 and S2 describe the deformability of cementitious adhesives. A higher class does not automatically remedy incorrect preparation.

EXAMPLES TO COMPARE	SELECTION CRITERION
Mapei Keraflex Maxi S1 Zero	Deformable cementitious adhesive. Check permitted thicknesses and substrates in the local data sheet.
Kerakoll H40 Gel	Assess suitability for the specific size and substrate. Use the compatible primers and components specified by the manufacturer.
Litokol Hyperflex K100	S2 adhesive to consider when the design requires high deformability; check the backing and installation conditions.

Grout and sealant

Cementitious grout, such as Litokol StyleGrout Tech, and resin-cement grout, such as Kerakoll Fugabella Color, require correct water quantities and cleaning times. Resin grout, such as Fugalite Color, requires specific mixing and washing procedures. Elastic joint sealant cannot be replaced by tile grout.

Test the grout colour on a sample, particularly with contrasting colours, worked finishes and relief surfaces. Check the risk of staining and abrasion. For a resin system, arrange compatible cleaner, tools and replacement water before installation begins.

Trade names are alternatives to assess, not automatic equivalents or Noema compatibility certifications. Times, coverage and dilutions belong to each individual technical data sheet.

Achieving continuous bonding

Check contact by lifting a tile during installation. Trowel notch size alone does not establish correct installation.

Mixing and spreading

Mix in the proportions and for the times specified. Observe any standing time and remixing; do not add water to a mix that has begun to set. Spread only the area that can be tiled within the actual open time, which is reduced by sun, wind and absorbent substrates.

Back-buttering and checking

For large formats and conditions requiring full bedding, spread adhesive on the substrate and a contact layer on the tile back. Comb parallel ridges, then move the tile across the ridges to expel air. Lift sample tiles and check adhesive transfer, including corners and edges. Adjust trowel, consistency and method before continuing.

Do not spot-bond or lay on adhesive that has skinned over. Remove and respread it in that case. Levelling clips assist alignment but cannot compensate for uneven substrates and must not lift tiles out of the adhesive bed.

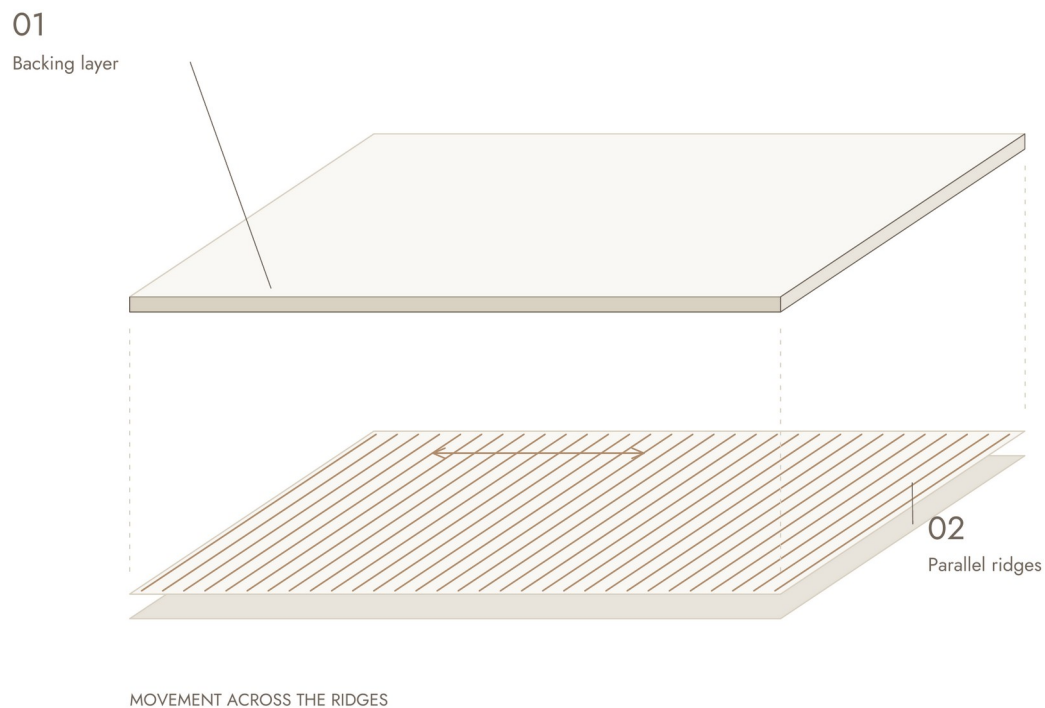


Image from the Brera catalogue

DIAGRAM 02

Verify the contact

Continuous bonding depends on spreading, movement and checking the tile back.



Spread

Form parallel ridges on the substrate and apply a contact layer to the back where required.

Move

Move the tile across the ridges to help expel air.

Lift

Check adhesive transfer at corners and edges too; correct the method before continuing.

Conceptual axonometric view, not to scale. Thicknesses and distances are separated to clarify the technique.

Grouting and handover

Cleaning begins during grouting. Residue left to harden requires more intensive treatment and increases the risk to the finish.

Before filling grout joints

Allow the adhesive to cure as required under actual conditions. Clean joints to an even depth without damaging edges or waterproofing. Keep movement joints clear. Protect sensitive adjacent surfaces without leaving adhesive or stains.

During grouting

Work in areas suited to the cleaning time. Remove excess with non-abrasive tools and observe the grout's washing window. Excess water, early washing or saturated sponges can alter the grout. For resins, follow only the specific procedure, frequently replacing water and tools.

Protection and initial cleaning

Do not set one date for all products: record separately when foot traffic, detergents and full use are permitted. Before cleaning cementitious residues, wait until the grout has the required chemical resistance. For epoxy residues, follow the dedicated procedure in the Cleaning manual.

Protect against sand, debris and other trades using clean material compatible with ongoing curing. Do not tape directly onto decorative faces. Hand over labels, spare material, products used, joint layout, photographs and care instructions.



Image from the Brera catalogue

Long-term maintenance

A properly cleaned floor does not automatically require wax, polish or protective treatments.

WHEN	ACTION
According to traffic and soiling	Remove grit by vacuuming or with soft tools. Wash with neutral cleaner at the specified dose and with clean tools.
Whenever a stain occurs	Identify the substance, collect excess and treat locally. Test the compatible product first.
When streaks appear	Check dosage, rinsing, hard water and residues from initial cleaning. Do not immediately increase concentration.
Periodically	Check sealants, grout joints, junctions and drains. Repair deteriorated areas with compatible materials.

Choose tools for the finish

Use non-abrasive cloths or systems on Matt and Naturale. Dirt enters the microtexture of Grip: a suitable soft brush and liquid recovery often work better than a higher dose. Protect Honed from sand, avoid abrasives and test every cleaner on a sample.

Identify the problem

A uniform haze may come from detergent, grout or site residues; a lasting change in sheen may indicate surface damage. If sample cleaning fails or changes the appearance, stop escalating chemical treatment. Photograph the dry surface and request a targeted diagnosis.

For documented doses, multibrand alternatives and intensive cleaning, use the Cleaning manual. Use the Site worksheets to record tests and handover. Recommendation: hand over both with the flooring.