ROYAL FACADE

INSTRUCTION ON CLINKER THERMOPANELS INSTALLATION

ROYAL FACADE™

12 Bagatela Street, 00-588, 5th floor, room 405, Warsaw, Poland

CONTACTS:
+48666273099
+380800217771
info@royalfasade.ua

Installation of facades, insulated with plates faced with decorative insulating panels with brick tiles "ROYAL FACADE™", foresees the following technological processes:

1. **Base preparation** (according to **State Construction Regulations B.2.6-22-2001** "Roofing arrangement with the use of dry building mixtures"), which must be strong,, dry and clean, with a deviation of the unevenness of the base when checked by a **2-3** meter level-rule.

For wall facade curvature measurement, use construction level (water, bubble, laser). The straightening tool shall be put to the wall corners parallelly to the floor horizon, then the curvature will be even to the maximum height of the play. Vertically, unevenness shall be measured using the builder's magnetic plumb bob (**pic. 1**).

For the optimal selection of the length of fixing elements and recommended adhesive compound expense, the permitted wall curvature on the area of up to **3 meters** should be less than **±10 mm**.

2. **Mounting of starting steel galvanized profile**, which is installed according to the level and assigned to prevent water accumulation, protection of panel base, as well as marking zero mounting line.

3. **Mechanical fastening of panels**, which shall be done using fixing elements in the following order: panels allocation, marking, drilling, cleaning of holes, installation of fasteners with subsequent fixation of panels.

4. **Filling of open joints at junctions** and fixings with a troweling mixture, following producer's instructions.

Depending on the condition and material of the walls, the panels shall be installed directly on the wall, which should be previously leveled and primed, without furring.

Picture 1. Builder's magnetic plumb bob

Fixing of facade decorative plates to bearing wall:

1. The quality of the surface, on which the mounting shall be conducted **should be inspected**, immediately before mounting facade decorative plates. The work surface should be dry and clean. Peeling old coatings and dirt (including oil or bituminous) must be removed.

2. The wall **surface shall be treated** with penetrating prime.

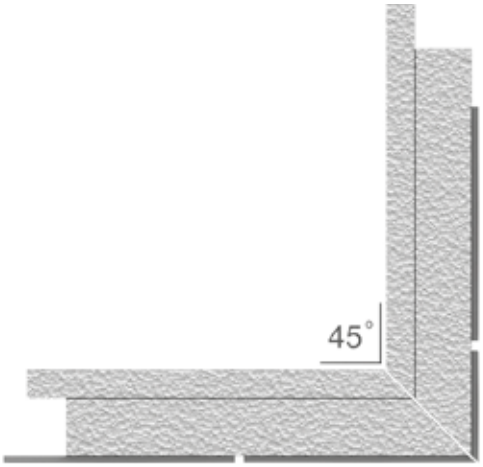
Picture 1.
Laser level

3. **The level of the lower row** of the panels shall be chalked using a laser (**pic. 1**) or water (**pic. 2**) level or relative to the wall level with consideration of constructive peculiarities of the object.

4. **Fix starting steel galvanized profile** on the marked level.

5. It is better to **start mounting** from external or internal corners or characteristic constructive elements of the building, using ready corner elements of «**Royal Facade**™» or by preparing them from wall slope panel using carpenter's knife and rule, saw, ensuring necessary parameters of the corner elements (**pic. 3**)

Picture 2.
Water level



Picture 3.
Corner from the slope wall panel

CONTACTS:
+48666273099
+380800217771
info@royalfasade.ua

Mounting of external wall

The corner element of thermopanel may be mounted in two ways.

Method 1

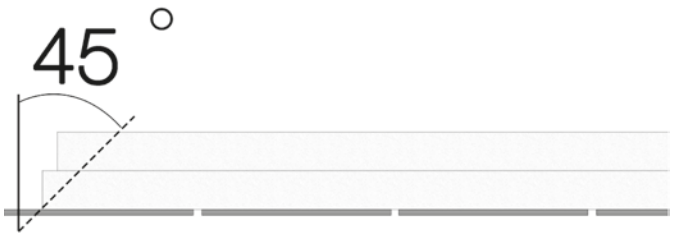
Formation of external corner directly on the object from the wall panel:

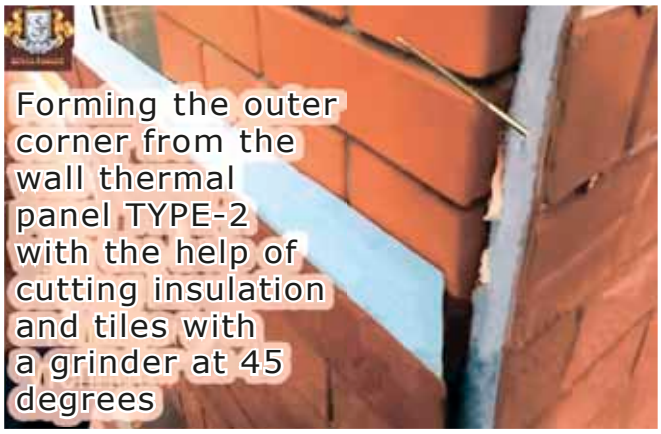
Wall panel cutting

PPanel cutting is carried out directly at the construction site, after the previous measurement of the necessary geometric parameters of the panel element and the insulated facade with a construction tape.

After marking the cutting area with the carpenter's pencil or highlighter, saw-cutting of tiles with an angle grinder using a diamond cutting disc **125 mm** in diameter for ceramic porcelain tiles with a speed of **10,000–11,000 rpm** shall be conducted.

Construction gloves and goggles should be used



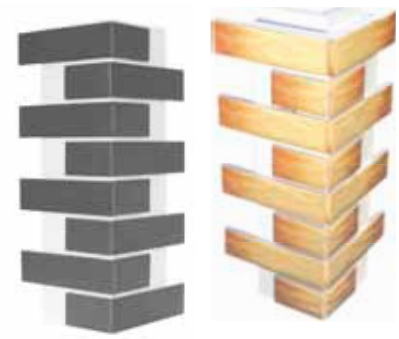


Picture 1.
Thermopanel cutting: lines of saw-cutting for external corner formation

12 Bagatela Street, 00-588, 5th floor,
room 405, Warsaw, Poland

Method 2

Installation of ready corner element of ROYAL FACADE™:



Base preparation (the angle should be right). Use the level.

In case of play, use float for foam plastic for levelling the surface.

Direct mounting of the corner element is carried out in compliance with all the rules for mounting a wall panel.

CONTACTS:
+48666273099
+380800217771
info@royalfasade.ua

The process of application of adhesive compound on the thermopanel

The adhesive compound of polyurethane bonding foam (**pic. 1**) shall be applied using a glue gun as a layer with a diameter o **1–1,5 cm** on the back side of the insulator. Leaving space **of 50 mm**, from the edge of edge lines, as well as in a zigzag in the shape of the letter **W** on the facade element of the surface of the **Royal Facade™** panel and should be pressed against the wall, controlling the vertical and horizontal level and the width of the tile joints.

Picture 1.
All-weather polyurethane bonding foam for quick mounting

The optimal expense of adhesive compound — is **1 canister** (**750 ml**) for **7 sq. m.** Adjustment of the position of the panel may be done within **15 minutes** depending on weather conditions. The optimal ambient temperature condition when working with the all-weather adhesive compound is **from 5°C** to **+35°C** provided that the temperature of the canister itself is **+22°C**.

After the adhesive has hardened, the panel must be additionally mechanically fixed with a metal nail into the plastic filler (which is located in the thickness of the bearing wall) at the points of fastening of the embedded PVC details of the Rondolles (**5 pcs.**) (slope wall panel). (**pic. 2**)

Picture 2.
Embedded detail in clinker thermopanel

12 Bagatela Street, 00-588, 5th floor,
room 405, Warsaw, Poland

Fixing elements for different material types

Fixing elements

- For stone, concrete, and brick — screw anchor plugs,
- For wood — self-drilling screw for wood;
- For aerated concrete — anchor for aerated concrete,
- porous ceramic block — expansion dowel on the ceramic block.

Picture 1.
Fixing elements for thermopanel mounting

Cutting of the elements of thermopanels of Royal Facade™

Panel cutting is carried out directly at the construction site, after the previous measurement of the necessary geometric parameters of the panel element and the insulated facade with a construction tape.

Construction gloves and goggles should be used.

After marking the area of cutting with the carpenter's pencil or highlighter, saw-cutting of tiles with an angle grinder using a diamond cutting disc **125 mm** in diameter for ceramic porcelain tiles with a speed of **10,000–11,000 rpm** shall be conducted.

Picture 2.
Tool for the correct
Mounting of Royal Facade thermopanels

Manual tile sticking

While cutting façade elements of **Royal Facade™**, the geometric size of the ready cut elements should be considered. The tile, having a geometric size of less than 80mm in width, should be stuck manually using polyurethane bonding foam while sticking the tile to the insulator or using a facade adhesive cement-sand mixture when applying tiles to the base of the facade directly.

www.royalfacade.eu

CONTACTS:
+48666273099
+380800217771
info@royalfasade.ua

Filling and pointing joints with a colored decorative mixture

Filling of tile joints shall be conducted after mounting facade wall element, **24 hours** after adhesive compound drying, but no later than 30 days after the installation of thermal panels.

Optimal temperature condition from **+5°C** to **+30°C** in cloudy dry weather. There are two main methods for mixture application.

Method 1
Smooth planning method

Required tools and material:

1. Jointing trowel
2. Roller for joint base perforation
3. Grout removal brush
4. Mixture for joint filling
5. Water sprayer
6. Mixer with a whisk for mixing the mixture
7. Construction bucket for mixing the mixture
8. Technical water

The work should be done in accordance with instructions for the use of dry construction mixtures

Grout preparation

The dry mix is mixed with clean water at room temperature, closer to cool, according to the proportion specified in the technical specifications.

In the case of seasonal temperature fluctuations, it is recommended to use a latex solution instead of water to improve the strength, adhesion, elasticity, moisture resistance, and weather resistance of cementitious grouts. The latex solution also reduces the likelihood of efflorescence, the appearance and growth of mould (fungus, moss). We get a homogeneous plastic mass with a "wet earth" consistency. Add the dry mix gradually to the mortar. Mixing should be done with a mixer or a drill with a nozzle.

To avoid foam creation while mixing, it is necessary to take a **5-minute** technological pause and then mix again immediately before work. The mixture should be used within **60 minutes**.

Clean corrosion-resistant containers and tools should be used during the preparation.

Attention! Low viscosity grout (consistency of “wet ground” or lime-and-sand mortar) shall be used for joint pointing.

Base preparation

Tile joint base (insulator: foamed or extruded polystyrene foam) should be perforated with the use of the special roller for the joint depth from **6 mm** to **12 mm** following the conditions under which the depth of the decorative joint would be at least **10 mm**.

The minimal depth for ceramic tile perforation is **6 mm**. Clean tile joints from the insulator residues (waste) with the brush with medium bristle.

When working **in unfavorable weather conditions** (high ambient temperature, strong winds or drafts, highly absorbent clinker, etc.), it is recommended to lightly dampen the work surface with water, but prevent the formation of a water film on the surface.

Attention! It is very important to maintain the same proportion while adding the water to the dry mass of the grout. Excessive water adding to the mixture leads to significant color change, deterioration of the hydrophobic properties of the solution, cracking, and efflorescence formation.

CONTACTS:
+48666273099
+380800217771
info@royalfasade.ua

While performing work, **do not add water to the grout** used as it can lead to the change of the grout color.

Adding any side additions is **not allowed**. In the case of regular joint depth, the grout should be applied in two layers according to the wet-on-wet technique and then pressed under pressure.

Uniform preparation of the grout, its application, and treatment of the joints guarantee the uniformity of the texture and color of the worked joints after drying.

While making breaks during work the grout should be closed. Fresh joints protect from rain, drafts, strong winds, frost, and direct sunlight to ensure normal temperature and humidity conditions for hardening, cover the masonry with a vapor-resistant film.

CPreservation of masonry joints wet guarantees homogeneous drying and color without fading. **Do not carry out** grouting work during **rain, frost**, , and unsuitable too **low or high ambient temperatures**.

Method 2
Method of pointing with manual dispensing gun

Required tools and material:

1. Mixture dispensing gun
2. Spatula
3. Color mixture

Base preparation

Base preparation should be conducted in the compliance with the requirements of the State Standard of Ukraine-H БА.3.1-23: 2013 and the State Standard of Ukraine-H Б В.2.6-212: 2016.

The joints and sides of the facing material must be strong, firm, free from dirt and dust, adhesive residues, etc.

Tile joint base (insulator: foamed or extruded polystyrene foam) should be perforated with the use of the special roller for the joint depth from **6 mm** to **12 mm** following the conditions under which the depth of the decorative joint would be at least **10 mm**. Minimal depth for ceramic tile perforation — **6 mm**. Clean tile joint from the insulator residues (waste) with the brush with medium bristle.

When working in **unfavorable weather conditions** (high ambient temperature, strong winds or drafts, highly absorbent clinker, etc.), it is recommended to lightly dampen the work surface with water, but prevent the formation of a water film on the surface.

Attention! Excessive water adding to the mixture leads to significant color change, deterioration of the hydrophobic properties of the solution, cracking, and efflorescence formation. Work performance Using a special gun, fill the joint with the obtained grout, in such a way, that the mixture sticks out of the joint. **In 60–120 minutes**, after the mixture begins to dry out (that is, it acquires the consistency of wet sand, and the surface becomes almost dry), form a joint with a spatula.

Drying time may vary depending on the adsorption of the tile base and environmental conditions (up to **3 hours** for base repelling water, such as extruded polystyrene foam).

After the grout mixture is completely dry, **remove the residues** with a stiff brush.

While performing work, **do not add water** to the solution that is used as it can lead to the change of the solution color. Adding any side additions is **not allowed**.

CONTACTS:
+48666273099
+380800217771
info@royalfasade.ua

In case of workability loss, restore the mortar mixture by re-mixing without adding water. If the grout mixture has got on the facing material, then in no case do not remove it, wait until the setting starts, then remove it by picking it up with a spatula, followed by wiping with a dry cloth.

After removing grout residues with the dry cloth, the polluted area may be swiped with wet cloth a with a strongly wrung-out sponge, without touching the joint. This moment is important under conditions when mixture setting-up achieved wet sand consistency.

Uniform preparation of the mortar, its application, and treatment of the joints guarantee the uniformity of the texture and color of the worked joints after drying. While making breaks during work, the solution should be closed. Fresh joints protect from rain, drafts, strong winds, frost, and direct sunlight to ensure normal temperature and humidity conditions for hardening, cover the masonry with a vapor-resistant film. Preserving masonry joints wet guarantees homogeneous drying and color without fading. Do not carry out grouting work during rain, frost, and unsuitable too low or high ambient temperatures..

Attention! When performing work, construction regulations, rules, and requirements of this manual should be followed.

Attention! Application conditions of the grout mixture at the construction site, as well as weather conditions when the grout hardens, can affect the final shade of the Hardened mixture. The color shade of the Hardened mixture may change depending on the method of joint formation. It is recommended to carry out a test application with tiles and grout of a specific color for a more accurate and final selection of the color of the grout.

Attention! Failure to comply with this instruction, excessive amount of water in the mixture and performance of work outside the temperature range can lead to a deterioration in the physical and mechanical properties of the hardened grout and cracking.

12 Bagatela Street, 00-588, 5th floor,
room 405, Warsaw, Poland

Removal of salt in joints

Efflorescence on the joints is formed as a result of the violation of the technological process of mounting works. In case of efflorescence formation in inter-tile joints, use:

Efflorescence cleaner Sikagard-S

Read the user manual here

After salt removal, the joints should dry, and the application of protective coating for facades is recommendedв

Sikagard-71 W Pro

Read the user manual here

ROYAL FACADE

For remarks

ROYAL FACADE™

HEAD OFFICE:

12 Bagatela Street, 00-588, 5th floor, room 405, Warsaw, Poland

+48666273099

info@royalfasade.ua

Working hours:

Mon.–Fri. 10:00–17:00

Sat.–Sun. Closed

www.royalfacade.eu

Dear customers,
before visiting the office,
Please clarify the visit time!