



MBRICO

Mbrico Tile Rooftop/Raised Floor Installation Guidelines

*The following information is the installation guidelines Mbrico recommends when installing the Mbrico Tile Rooftop system. Installation guidelines are the steps Mbrico recommends to insure a successful application. Ultimately, the purchaser and the onsite installer are responsible for ensuring proper installation.

**Mbrico recommends that consumers contact a qualified installer in their area prior to placing an order to ensure all measurements, order quantities and installation is done accurately. Mbrico is a tile decking product manufacturer and tile distributor. All installations are done by a third-party installer of the consumer's choice.

Preface:

Verify that your flat-roof and structure have been constructed properly. Verify your projects frame, concrete, walls, slope, grade, quality and attachment to any structure meet or exceed any local or national codes. This system is intended to require no penetration of roof membranes.

Follow the layout that was used to order your Mbrico deck surface materials if possible. Your layout will minimize the cuts and partial tile locations to less obvious areas of the surface just as you would with interior tile products. In some respects, layout of your new deck is like laying interior tile. You will plan for stairways, angle areas and partial rows that require cutting tiles. Also, you will plan for the fastening of your handrails if applicable or surrounding parapet walls. Nothing will be directly attached to the Mbrico surface via fastener or adhesive. The Mbrico deck should be planned and installed with greater care as it will outlast other deck products and have no maintenance requirements other than an occasional rinse.

You will want to set the height of your deck accordingly. The Mbrico roof-top surface adds variable height and a total weight of 10.5 pounds per square foot to your existing surface. The finished Mbrico surface is intended to be level.

Great care has been taken to provide a relatively easy surface system to install. This product was specifically designed for the quality carpentry crew to install, will offer our clients years of maintenance free enjoyment and saves the refinishing and replacement costs all other composite, wood and concrete surfaces require. The Mbrico deck system was created to satisfy the discriminating client who was not satisfied with conventional plastic, concrete or wood options that were available in the past. The textures and finishes offered by Mbrico fit the needs of any quality home or project.

Installation on raised pedestal system is used mainly on large, regular surfaces, or above previous floors, rooftops or balconies provided these shows no signs of infiltration. The open gaps between the slabs allow the rain water to drain off into the cavity created under the panels. Thus, a flat, even floor is obtained, while the underlying waterproof layer will have the gradient required to drain off the rain water. The load-bearing structure is made of polypropylene feet with a large base and rounded edges, to prevent damage to the insulating layer. This solution allows for passage of any underlying elements and offers a practical passage for pipes and wiring.

Step 1: for laying on pedestal feet the underlying base must be fully waterproofed.



Step 2: Before laying clean the underlying surface carefully.



Step 3: Select appropriate size and height pedestal for starting row with consideration for rooftop slope. Pedestals come in 3 sizes and are adjustable for height and slope. Extension rings are available for additional height requirements.

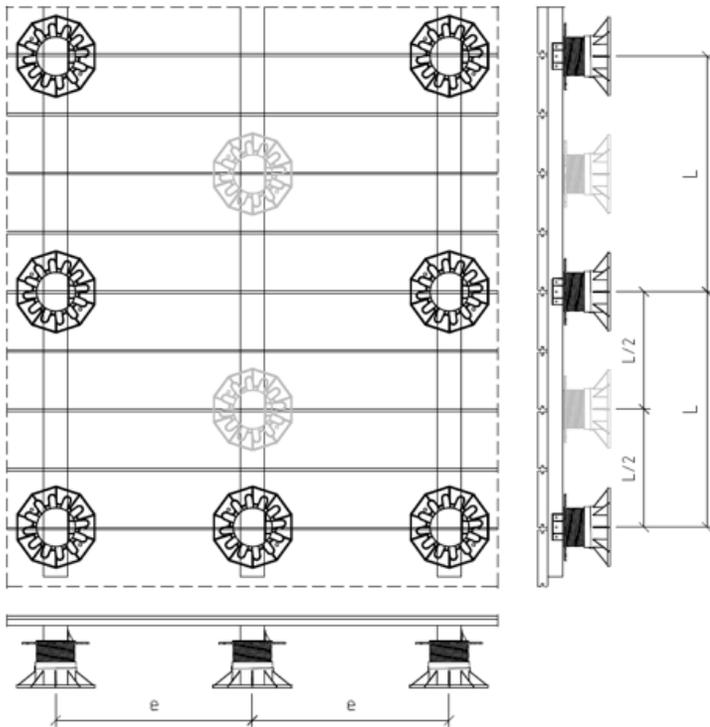
Product designation	Item No.	Nominal mounting height/Adjustable range H [mm]	Load-bearing capacity* [kN]	PU
PRO S	946070	30 - 53	8,0	10
PRO M	946071	53 - 82	8,0	10
PRO L	946072	70 - 117	8,0	10



Step 4: it is advisable to start laying from a perimeter corner, if there is one. This allows you to use complete tiles and work across the surface using the tiles as your spacers. You will notice 2 sides of the Mbrico tiles have spacing bumpers machined into the substrate. Tiles are to be aligned bumper to bumper. Sides without bumpers are to align with tracks.



Step 5: Using your provided surface plans, begin placing pedestals spaced accordingly to load requirements. (See image below).



Step 6: Using the rooftop flat-top track (for flush against perimeter) begin installing first track against perimeter structure of surface. The patented Mbrico rooftop 4-meter extrusion can be "clicked" into the click top pedestal feet. No additional fastener is required between the extrusion and pedestal. Place pedestals as close to parapet wall as possible on level surface. No greater than 1/3 width of perimeter tile dimension.



Step 7: Once tile layout is figured, use supplied epoxy adhesive to fasten tiles. Apply half-dollar-size amounts every 6 inches to top of perimeter track. DO NOT APPLY ADHESIVE DIRECTLY TO WATERPROOF MEMBRANE.



Step 8: Tiles are to be adhered to perimeter track and overlap to compensate for distance between wall and pedestal. Leave at least 1/8" gap between tile and structure.



Step 9: Cross bracing must be used to prevent surface racking from side to side. This greatly increases stabilization of the Mbrico surface. Mbrico includes U-channel cross braces cut to size as shown in picture. Angle brackets are used for fastening cross braces to track with provided self-drilling screws. See chart at bottom of instructions for cross brace spacing guidelines. All Mbrico substructure is CNC machined for tolerance. The cross bracing should be the same length for all full tile rows. L brackets are also slotted for minor adjustments. Reference provided installation diagram for spacing specific to your project.



Step 10: Begin installing tiles in first row. Grooved edge of tile is to be received by horizontal flange on Mbrico Tracks. Continue previous steps and begin installing tiles outward from perimeter.



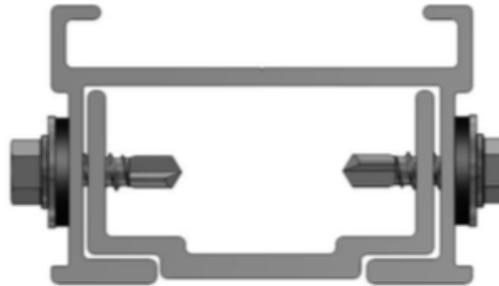
Step 11: For non-perimeter rows, use and Mbrico T-Track so tiles can be received on both sides of the track. This provides automatic spacing and captures the tiles.



Step 12: When installing, check that the laid slabs are level using the slope adjustable feet. Supplied shims can be used if additional slope correction is needed. Set laser and tripod on top of tile to insure level installation.



Step 13: To connect tracks to one another, use a Track Connector Sleeve and included hardware. Four self-tapping screws per connector are included. With the aluminum profile system connector enables the system profiles extend endlessly. The connectors are simply inserted and fixed with the matching self-tapping screws supplied in the package.



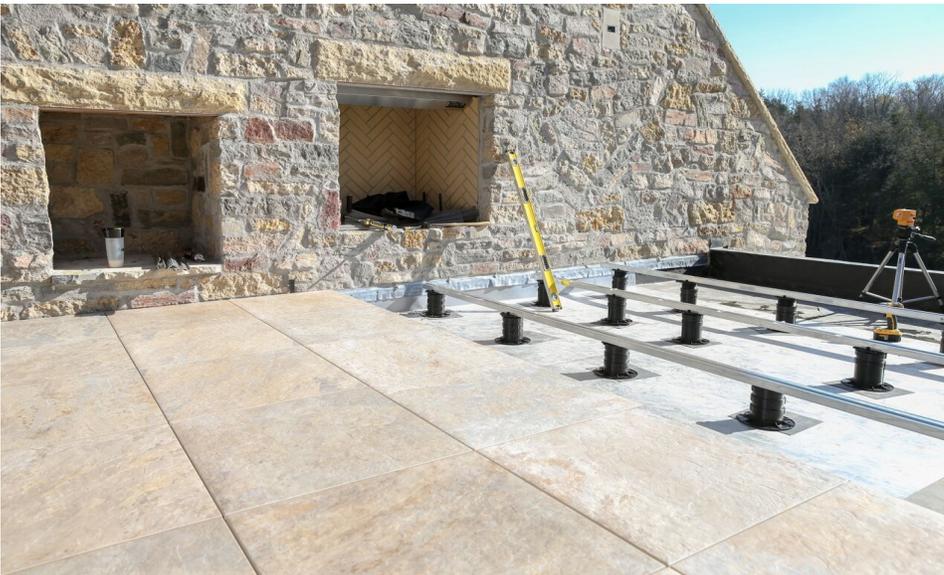
Step 14: Track joints of the substructure should always take place directly over a pedestal point. To reduce vibrations, we recommend the adjustable feet every 2nd substructure profile around $L / 2$ offset to arrange. Refer to previous diagram.



Step 15: When installing, check that the gaps between the tiles run flush and even. This increases aesthetic appearance and ensures for proper water drainage.



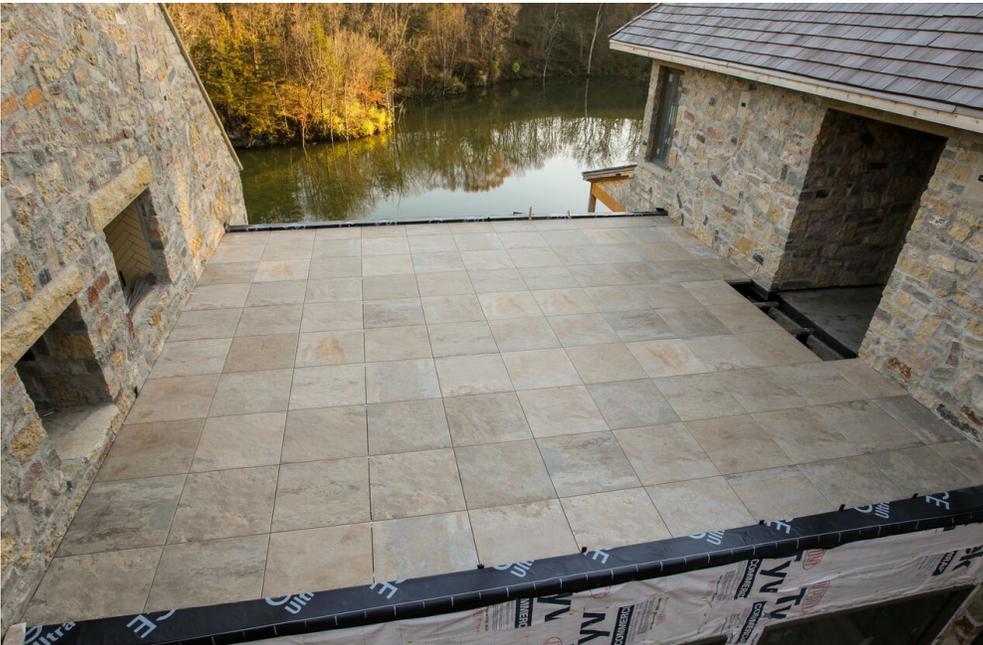
Step 16: Continue previous steps as you install tiles across deck body surface.



Step 17: When opposite perimeter is reached and final row is to be installed, tiles can be cut to size to meet dimension requirements. Tiles can be cut using a conventional wet tile saw with a diamond blade.



Step 18: Use Mbrico perimeter flat track to finish final row against structure. A 1/8" gap should be left between Mbrico surface edge and any structure or wall to allow for proper drainage. See step 7.



Reference:

Spans for aluminium system profiles in mm

Max. spans for aluminium system profiles in mm ^{a)}							
Useful load kN/m ²	Profile clearance in mm ^{b)}						
	300	350	400	450	500	550	600
2,0	1000	950	900	850	850	800	800
4,0 ^{c)}	800	750	700	700	650	650	600
5,0 ^{c)}	750	700	650	650	600	600	550

a) Specification of the max. span with which the deflection of the profile does not exceed $L/600$

b) Example: clearance of profiles to one another = 550 mm, useful load = 2,0 kN/m² → max. span of profile = 800 mm

c) Useful loads in accordance with DIN 1055-3:2006, roof terraces = 4 kN/m², terraces in public = 5 kN/m²

Max. support distance L [Unit of measure: mm] of pedestal Eco-Line ^{a)}								
Payload [kN/m ²]	Axial spacing e [mm] of the profiles to each other ^{b)}							
	300	350	400	450	500	550	600	800
2,0	1000	1000	900	800	750	600	600	450
4,0 ^{c)}	750	650	550	500	450	400	350	250
5,0 ^{c)}	650	550	450	400	350	350	300	-

Max. support distance [Unit of measure: mm] of pedestal Profi-Line ^{a)}								
Payloads [kN/m ²]	Axial spacing e [mm] of the profiles to each other ^{b)}							
	300	350	400	450	500	550	600	800
2,0	1000	1000	1000	950	900	850	850	750
4,0 ^{c)}	900	850	850	800	750	750	700	650
5,0 ^{c)}	850	800	800	750	700	700	650	600

Max. span L [Unit of measure: mm] of aluminum system profile ^{a)}								
Payload [kN/m ²]	Axial spacing e [mm] of the profiles to each other ^{b)}							
	300	350	400	450	500	550	600	800
2,0	1000	1000	1000	950	900	850	850	750
4,0 ^{c)}	900	850	850	800	700	750	700	650
5,0 ^{c)}	850	800	800	750	700	700	650	600

a) Max. support spacing (L) for Click Foot/Big Foot adjustable feet at load capacities of 2, 4 and 5 kN/m², at a board thickness of 25 mm and a board density of 7 kN/m³.

b) If WPC boards are used, the centre distance e between the profiles must not exceed 400 mm!

c) Imposed loads according to DIN EN 1991-1; roof terraces = 4 kN/m², decks for public use = 5 kN/m².

Payloads are governed by the Euro Code 1 of DIN EN 1991
There are loads due to the destination
proper use of a component can be expected.

Expressed in the Unit: kN/m²
Kilonewton per square meter, 1 kN ≈ 100 kg

- Terraces without special request → 2,0 kN/m²
- Roof terraces, loggias, etc. → 4,0 kN/m²
- Terraces in the public space → 5,0 kN/m²

