



*Novomat® is a registered trademark property of Emac®, that identifies our own model of entrance mat. This brand investment represents the quality of product and service of Emac®*

**Novomat®**

## TECHNICAL PRODUCT GUIDE

## 1. WHAT IS AND WHY INSTALLING NOVOMAT®?

Novomat® entrance mats are an anti dirt barrier when installed in the entrance of any kind of buildings. A correctly dimensioned and installed mat can eliminate up to 80% of dirtiness that we usually carry on the soil of our shoes.

The main reasons to install a technical mat Novomat® are:

### 1. Functionality

The main function of our technical mats is removing the dirtiness that it is carried on the soil of the shoes of people. For proven, it is recommendable installing a regular use mat with, at least, 3 metres in length.

The remotion of the dirtiness of the soles of the shoes, represents an important saving of cleaning and maintenance costs. The floorings do not suffer damage caused by abrasion with dust particles and remain cleaner, reducing the cleaning frequency and prolonging its life.

AS a consequence of the reduction of the cleaning frequency, we also reduce the use of chemical products that emit VOC (volatile organic compounds) so we also improve the quality of the indoor air. The retention of dust in the mat also improves the quality air by avoiding airborne dust particles.

### 2. Security

The installation of an entrance mat helps to absorb the humidity in the soles of the shoes, avoiding that the flooring could be wet, helping to prevent from risk of falls or slips.

For this reason it is recommendable to dimension the mat such that the shoe is in contact with it at least on three occasions. This will guarantee the remotion of humidity and dirtiness. The carpet is classified as Efl fire resistant.

### 3. Accesibility

In order to facilitate the traffic of the disabled, it is recommended to place entrance mats flush to the flooring or, failing that, with a ramp frame not exceeding a level difference of 13 mm.

The Novomat® technical mats have a 2-year guarantee in accordance with current legislation.

## 2. TYPES OF TECHNICAL MATS NOVOMAT®

Novomat® is a system of entrance mats consisting of high quality aluminium profiles with different kinds of finishings available in different colors. The entrance mats Novomat® are delivered mounted and ready to install.

	STANDARD KIT		CUSTOM MADE
	SLIMM	WELL	ALL
Models	Novomat® Slimm Kit	Novomat® Fosa Kit	Novomat® 8, Novomat® 12, Novomat® 15 & Novomat® 20
Dimensions	1200 x 905 mm	1200 x 881 mm (well dimension)	Custom made
Profile heights	8 mm	15 mm	8/12/15/20 mm
Finishes	Grey textile carpet		Black rubber Textile carpet grey/anthracite/red/tobacco/beige
Complements	<b>Self-adhesive</b> ramp frame (cut to size)	Perimeter frame cut to size	Available in option
Production ime	Immediate delivery	Immediate delivery	On request
Ideal for	Already finished floorings	In mat wells, with immediate delivery	All kind of installation depending on the height, finish, color...
Profiles	Aluminum 6063 - T5 matt silver		

\* Dimension of profile + support rubber. Please, note that the carpet protrudes 2,5 mm over the well and the rubber 4 mm

**3. TESTS PERFORMED**

Novomat® has undergone several laboratory tests to certify different properties.

**3.1. Wear test**

*Physical endurance test. Section 5.7 / UNE-EN-1929-1: 1998 Shopping carts*



This test is carried out by moving a shopping cart loaded with 80 kg on a technical mat Novomat® 15 textile finish in a three meter long round trip. After 100,000 cycles it is confirmed that there is no structural damage to the aluminum and that the carpet has normal wear and tear for use.

**3.2. Reaction to fire test and classification**

*Fire resistance test based UNE-EN 13501-1:2007+A1:2010*



Classification test of fire behavior of construction products and building elements. Part 1: Classification obtained from reaction to fire tests.

Fire class	Smoke production		
	C <sub>FL</sub>	-	s

**3.3. Test Emissions Volatile Organic Compounds (VOC)**

*COV test based UNE-EN ISO 16000 Parts 3,6,9,11. Quality air indoors.*

Ley Grenelle. Decree N°2011-321 March 23th 2011 related to the labeling of construction products, floor and wall coverings and paints / varnishes on their emission of volatile contaminants.



### 3.4. Slip resistance test

A. Slip resistance test according to UNE 41901:2017 EX. Reports nº10865 (rubber) y 10866 (textile)

Model	Classification
Novomat® textile	55 / Class 3
Novomat® rubber	53 / Class 3



Pendulum test and classification according to the provisions of the Technical Building Code DB SUA - safety of use and accessibility.

B. Critical sliding angle test of floorings according to DIN 51130: 2014 Section 5. Reports nº10844 (rubber) y 10342 (textile)

Model	Classification
Novomat® textile	23,1° / R11
Novomat® rubber	9,5° / R9

### 3.5. Green label plus



Green Label Plus is an independent testing program that identifies carpet, adhesives, and cushion with very low emissions of VOCs to help improve indoor air quality. It is an outgrowth of, and enhancement to the CRI (The Carpet and Rug Institute) Green Label Testing program. By selecting Green Label Plus carpet, adhesive, or cushion, you are assured one of the lowest emitting products on the market, and you may be able to earn credit under LEED, Green Globes, or Green Guide for Health Care.

## 3. FEATURES TECHNICAL MAT NOVOMAT®

### 3.1. TYPE OF INSTALLATION

The Novomat® entrance mats are available in two different models according to the type of installation.

#### Installation on surface (slimm range)

These entrance mats are installed on already finished surfaces and are perfect for rehabilitation or reform works or in areas without possibility to make a well.

The mat is supplied with its ramp frame (in option) to avoid differences in level. You only need to place it on the desired surface.



#### Installation in a well

These entrance mats are placed during the work and are installed flush to the flooring. They have a higher capacity to retain dirt and are perfect for areas with high traffic.

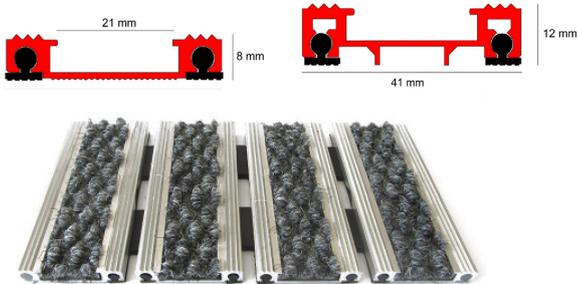
The perimeter frame (in option) is installed to finish and protect the edge of the well.



### 3.2. PROFILES

Novomat® is available with four different heights and two different designs.

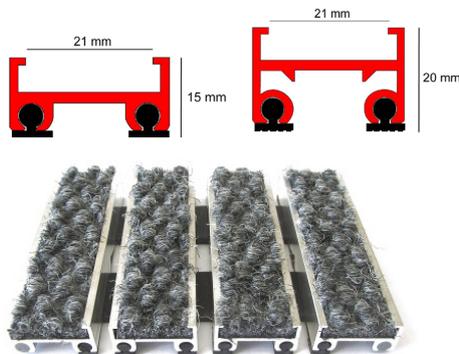
#### Models with minor height



The models with 8 or 12 mm height have a larger aluminum visible side and have a reinforced structure to allow the traffic. These profiles have a visible width of 41 mm, with non-slip sides, and can be installed both in well as on already finished surfaces (with the appropriate ramp frame).

They are suitable for areas where there is no well or there is no possibility to do work. Due to its height are suitable for moderate traffic, small shop entries, houses...

#### Models with higher height



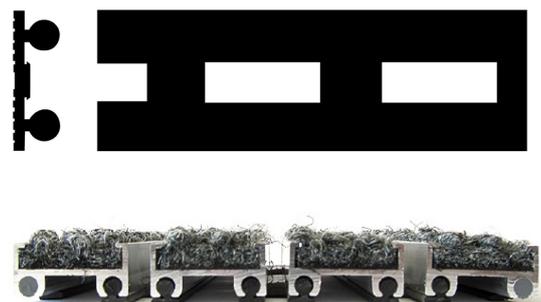
The models with 15 or 20 mm height have a thinner design, with a visible side of 27 mm. They have a greater capacity to retain dirt due to its height, so are suitable for high traffic places such as public buildings, malls, hospitals or similar projects.

### 3.3. TYPE OF JOINT

The aluminium profiles of Novomat® are connected by a high resistant plastified rubber joint. To avoid a closed system, this joint has perforations that allow the evacuation of dust and moisture.

This joint allows the easy rolling of the mat and acts as acoustic isolator and shock absorber. This way avoids the metallic noise that would be produced when stepping the mat without joint.

The system of Novomat® combines the better features of the open systems (cable) and the closed ones (rubber).



### 3.4. FINISHES

Novomat® is available with textile carpet finish in range of colors to be installed indoors. For covered outdoors is available with black rubber. All the finishes can be combined in the same entrance mat under request.



Black rubber

Red carpet

Grey carpet

Beige carpet

Tobacco carpet

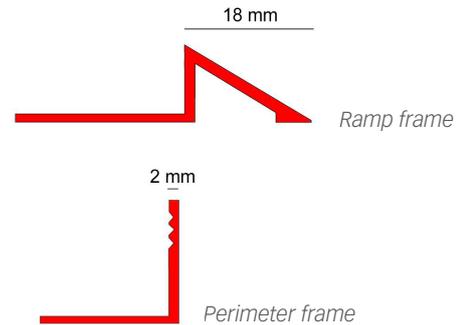
Anthracite carpet

### 3.5. COMPLEMENTS

There are complements available in option to get the perfect finish of the installation of Novomat®.

The perimeter frame, with 2 mm width, is the complement to place when installing Novomat® in a well. It serves as an edge protector and can be installed in all Novomat® heights.

For installations on already finished surfaces, it is available the ramp frame 8 mm height (also, in option, 12 mm height).



## 4. HOW TO CHOOSE THE MOST APPROPRIATE NOVOMAT ENTRANCE MAT?

### 4.1. TYPE OF INSTALLATION

We initially have to choose the correct model depending on if there is a possibility to make a mat well or, on the contrary, if there is an already finished flooring to install the entrance mat on it.

If there is a mat well available, we can choose any of the four available heights depending on the height of the well or the most appropriate model for our project.

If the entrance mat is to be installed on already finished floorings, we recommend the installation of Novomat® 8, though the model Novomat® 12 can also be installed with its complements.

### 4.2. HEIGHT OF PROFILE

The more intense the traffic is, the most quantity of dirt has to retain the entrance mat. Therefore, the recommendation is choosing the higher entrance mats for areas with intense traffic, since due to the height of the profile they have a greater capacity to retain dirt. This results into a minor cleaning frequency and help to save costs of cleaning an maintenance.

However, in many occasions the mat well or the particularities of the project do not allow to place the optimal option recommended by Emac®. **There is no problem** in placing other models. Just keep in mind that the mat will be functional but probably will increase the cleaning frequency and, as a consequence, the maintenance costs.

MAT	INSTALLATION		TRAFFIC			OUTDOOR	INDOOR
	HEIGHT MM	SURFACE	WELL	LOW-MEDIUM	HIGH	HEAVY	RUBBER
Profile + rubber base	With ramp frame	With or without frame	Houses, clinics, small shops...	Office or administrative buildings	hospitals, universities, malls, airports...	Retain of coarse dirt	Retain of fine dirt or moisture
8	•	•	•			•	•
12	•	•	•			•	•
15		•	•	•		•	•
20		•	•	•	•	•	•

### 4.3. FINISH

For outdoor mats, the best option is placing the Novomat® with rubber finish. The rubber, due to its hardness and striated surface, will help to clean the coarse dirt on the soles of the shoes before entering the buildings.

For indoor mats, the best option is placing the Novomat® with textile carpet finish. This carpet helps to clean the fine dirt on the soles of the shoes and absorbs the moisture, guaranteeing a remarkable reduction of dirt, preventing the flooring from deteriorating and helping to reduce the cleaning frequency.

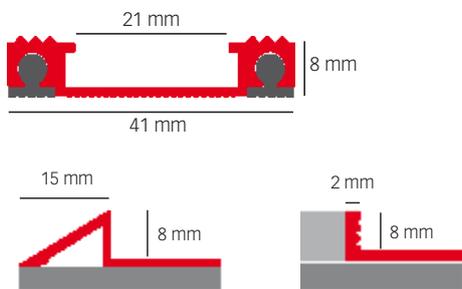
The best choice is creating a bizona system of cleaning which combines an outdoor entrance mat, in front of the entry of a building, with another one with textile carpet finish for indoors. This way, before entering a building we ensure that the coarse dirt is retained outdoors and once inside, the textile carpet cleans the fine dirt and absorbs the moisture. With this bizona system up to 80% of dirt can be retained, resulting in an important saving in costs of cleaning and maintenance.

If there is no outdoor entry, another option would be placing an entrance mat with a combination of rubber and textile carpet finishes.

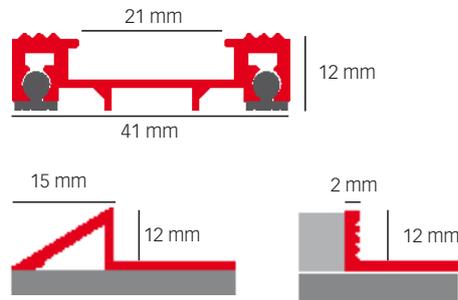
### 4.4. COMPLEMENTS

There is a perfect complement for each model of Novomat®. There are ramp frames available (for Novomat® 8 or Novomat® 12) or perimeter frames for wells (all models).

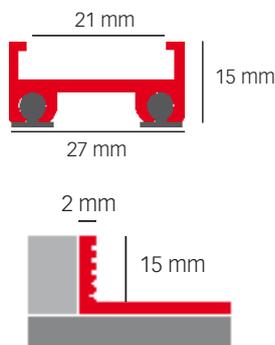
Complements for Novomat® 8



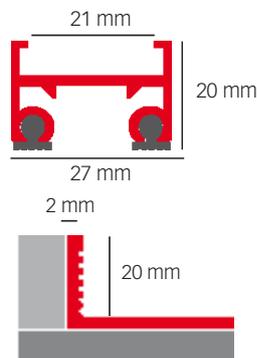
Complements for Novomat® 12



Complements for Novomat® 15



Complements for Novomat® 20



### 4.5. CUSTOM COMPLEMENTS - CUSTOM PLATE FOR NOVOMAT®

The technical entrance mats Novomat® 15 and Novomat® 20 have the possibility to be customized with the desired logo or design. This customization will give more visibility the brand and will provide a differentiating element at the entrance of your establishment.

The logo will be engraved in **brown-black\*** color with approximate dimensions 180 x 50 mm on a satin steel plate of 66 mm width (Novomat® 15 or 20) or 180 x 78 mm on a satin steel plate of 93 mm width (Novomat® 8 or 12). The installation of the plate is easy. You will only need to apply the adhesive on the inner face of the plate, place it between two of the Novomat®'s aluminum slats and fix it with adhesive. You can use an universal acetic silicone.

To customize your entrance mat we will need you to send us your logo in vector format.

The custom plate for Novomat® can be installed over new or existing mats.

*\*The color of the engraved logo is indicative. The variation of the tone intensity is considered as normal.*



## 4.6. DIMENSIONS

### 4.6.1 LENGTH OF THE TRAFFIC DIRECTION

The dimensions of the custom made entrance mats will be defined in each project according to the needs and particularities of each one.

Nevertheless, there are some basic recommendations in several reference documents and standards that establish what is the best length for entrance mats.

So, in the **DB SUA1 del CTE, chapter 1** (Slipperiness of the floorings), *Point 3 - humid areas in entries-* says that:

*The condition required for building entries has as a target to provide with a transition area between the outdoor flooring (wet/humid) and the indoor flooring (dry) that allow the sole of the shoes to lose moisture progressively. This can be achieved, among others:*



*With an element like an entrance mat, able to absorb the water on the soles of the shoes. In this case, the length of the traffic direction must ensure that both feet make contact with the surface of the mat, being preferable at least two contacts with each feet. It can be considered that a length of 2 m in the traffic direction is enough for all kind of traffic.*

*As an alternative solution, this length can be reduced if the entry of the building reduces the length of the traffic direction. For example, when there are revolving doors.*

Inside the certification **LEED - Leadership in Energy & Environmental Design** - from the US Green Building Council, are recognized the benefits that provide the correct installation and use of a technical entrance mat like Novomat®. It is known that the installation of the mats improve the quality of the air (by reducing the presence of dust) and help to preserve the floorings.

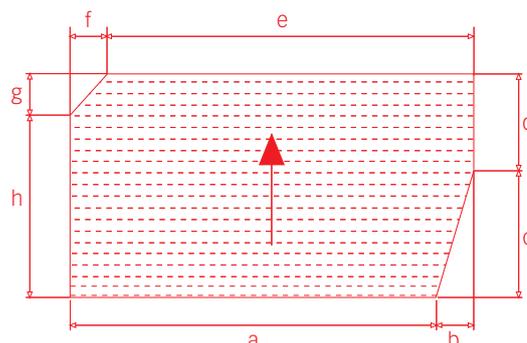


For an efficient cleaning, LEED recommends the installation of permanent systems of entrance mats with **at least 3 m in length**.

In general, it is considered that a 3 meters length of the direction of the traffic in mats (or four steps as an equivalence) is enough to get up to 80% dirt retention.

## 5. HOW TO REQUEST A NOVOMAT® TECHNICAL MAT?

Normally, will be used the Technical Mat Order Sheet supplied by EMAC® where the necessary data is indicated. In case you do not have this sheet, it will be necessary: a drawing with all the dimensions (indicating if it is the well dimension or the mat dimension) , direction os passage, mat height, carpet color and whether or not it has a perimeter frame. The drawing must identify all the necessary dimensions of the mat to be able to manufacture it, especially in the case of irregular mats.



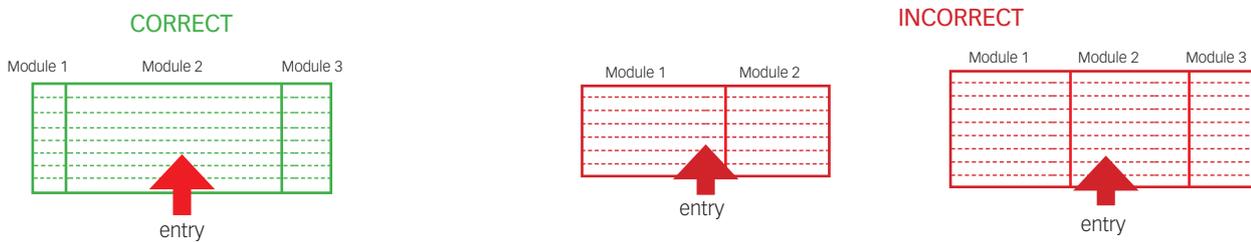
If the dimension indicated is the well dimension, 2 mm will be deducted from the total dimension due to the necessary tolerance. If the mat is to have a perimeter frame, an additional 2 mm will be discounted (4 in total).

Novomat® technical mats have an ending aluminum piece that can be cut to size in order to adjust the mat to the dimensions required. If the mat dimension coincides with the multiple of the profiles, it will not have these ending profiles. This ending profile is made of aluminum with a striated finish, remaining visually like a frame and favoring slip resistance.

### 5.1 LARGE ENTRANCE MATS

Large mats should be divided into several pieces to facilitate transport, handling, installation and cleaning.

The maximum width of our mats, for logistic reasons, is 2,90 meters. Larger mats should be divided into several pieces. To locate the position of the cuts, the width and location of the entrance door must be taken into account. In general, it is recommended to distribute the pieces in such a way that the joint between them does not coincide with the central passage area, as shown in the following drawings.



The joint between pieces is made by means of a metal plate embedded in the lower part of the mat. This plate is supplied assembled on one or more slats of one of the mats. It will only be necessary to fit it into the equivalent slat of the adjoining mat, leaving both pieces solidly together.



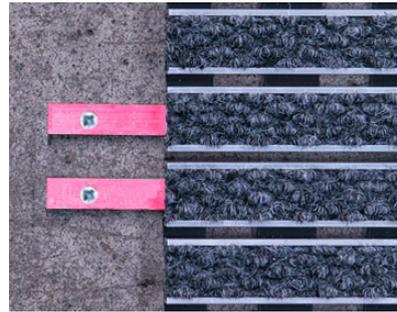
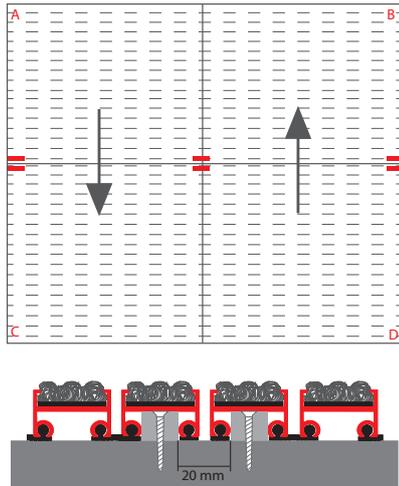
*\* Please note that these plates cannot be fitted on the Novomat® 8 model, so it will not be possible to join sections with this mechanism*

In the same way, the maximum depth of the mat is set at about 3 meters (for mats with a width of 3 m) since larger dimensions generate an excessively heavy package, which is very difficult to handle in transport and on site. In each case, the total weight of the mat will always be assessed before making a decision.

In the same way, the maximum depth of the mat is set at about 3 meters (for mats with a width of 3 m) since larger dimensions will generate an excessively heavy package, which is very difficult to handle in transport and on site. In each case, the total weight of the mat will always be **assessed before** making a decision.

In the event that the carpet must also be divided in the direction of passage, it will be done by installing some plates on the support. These plates are supplied together with the mat and must be screwed to the ground at a distance of 20 mm. Later we will fit the mat on top and it will remain fixed and at the necessary distance so that the union is not noticeable. The necessary plates are supplied with each mat (hardware not included).

*\*Drawing details on the next page*



### 5.2 AVAILABILITY OF REPLACEMENTS FOR NOVOMAT®

The technical entrance mats Novomat® have been designed and manufactured with high quality materials with a long utile life. Therefore, it is not expected that the textile or rubber inside the aluminum profiles should be replaced.

However, if a premature deterioration will happen, there is a possibility to acquire the textile carpet or the rubber strips to replace the old ones. The strips are available in 3 m length.

To install the new strip, take off the old one by one end and pull it firmly. Then apply adhesive, type contact adhesive, and insert the new strip. Press to guarantee optimal adhesion and leave dry.

## 6. INSTALLATION

### Kit entrance mats

Our standard Novomat® Kit mats have been designed for a quick and easy installation once received the material. All the complements are delivered cut to size.

- **Novomat® Slimm:** The ramp-frame is delivered cut to size and with self-adhesive. Unpack the frame, mark its position in the flooring, remove the adhesive protector and glue the pieces ensuring a perfect miter joint. Then unpack and unroll the mat and place it so it fits the frame.

- **Novomat® 15:** The perimeter frame is delivered cut to size for a direct installation. Just unpack the frame, place it protecting the edge of the well and glue it using mortar or adhesive type polyurethane mastic. Be sure that the adhesive do not protrude over the fixing wing. Then, unroll the mat and place it so it fits the frame.

### Custom made Novomat®

Our entrance mats Novomat® can be ordered custom made with or without complements. If you order Novomat® with complements, take into account that its length is 2,5 lm. You will need to cut to miter the profiles fitting the size of your mat. Then install the frame following the same steps than Novomat® 15 kit or Novomat® Slimm, unroll the mat and place it so it fits the frame.

If you need a Novomat® mat without complements, just unpack the mat, unroll it and place it into its position.

In **custom made** mats installations, first take the measure of the well and cut to size the “Novosuelo” profile supplied. Once the profiles have been cutted, apply the adhesive on the rear of the anchoring wing and place the profile along the edge of the well.

Once the adhesive has dried, just unpack and unroll the mat and place it inside the well.

If the mat to install is a **slimm mat**, do the same operation but using, in this case, the Novonivel® profile to finish the edge of the mat.



## 7. CLEANING AND MAINTENANCE

The Novomat® entrance mats should be cleaned regularly to avoid permanent dirtiness. You can use the vacuum cleaner to vacuum the gap between the slabs and the surface of the carpet. The mat can be easily rolled up to vacuum the well.

You can eventually use a drained mop to clean the carpet to remove possible embedded dirtiness.

## 8. SERVICE

Our models Novomat® Slimm and Novomat® Fosa, our models in kit, are available in stock for immediate delivery. You will receive your order in our usual deadline.

Our Novomat® custom made have an adjusted delivery time depending on the design requested. You can check the delivery time for your order with our sales department in [export@emac.es](mailto:export@emac.es)

## 9. TECHNICAL INFO

You can find out all the information about the technical features of Novomat® in this Technical Product Guide. If you have any other question, please contact our technical department in [tecnico@emac.es](mailto:tecnico@emac.es)