

INNOVATIVE EQUIPMENT  
FOR MANUFACTURERS  
OF MOSAIC TILES



**K.M.K. SYSTEMS**

SOFTWARE DEVELOPMENT COMPANY



**RK-KMK-250**

ROBOTIC UNIT  
FOR MOSAIC FABRICATION

## PRODUCTION of MOSAIC IN the WORLD

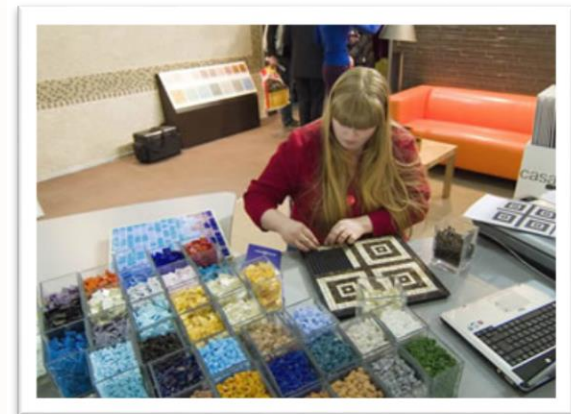
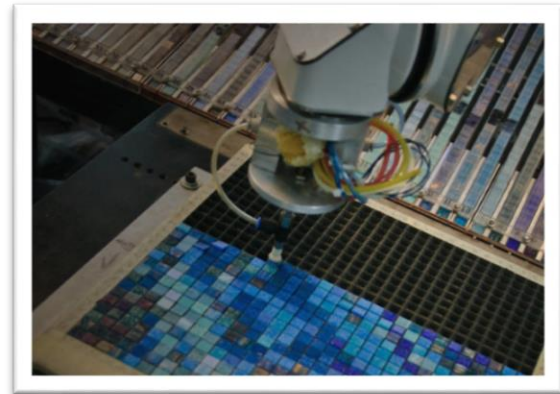
Manufacturers of mosaic in the world use different technologies for generating drawings, assemblies, sets of patterns.

In the Chinese market uses mostly human labor. In the U.S. market are now using the robot for the Assembly of panels of the mosaic, but the Assembly method is very costly and does not provide high speed required for industrial production. European solutions will allow you to collect sets of mosaics, but in random mode, you cannot set a specific picture that we need.

**Company K. M. C. systems** offers you an innovative solution for the European market, which will allow European manufacturers to automate the process of assembling the mosaic, will allow to collect sets according to a given pattern, to reduce the cost of operations, and thus gain a competitive advantage over other world producers.

**RK-KMK-250** is a robotic complex for the industrial fabrication of the panels mosaic that allows you to create images **up to 250 flowers**, minimizes human involvement in the fabrication process, thus eliminates errors and increases the speed of farication.

The manufacturer gains a competitive advantage in speed, quality and range!



## GOALS AND OBJECTIVES

**RK-KMK-250** will be interesting for manufacturers of mosaic and manufacturers of ceramic tile who are just thinking about starting a new direction for the production of mosaic, and are interested in process of automation.

### GOALS

Automation of the  
fabrication process  
of mosaic

Increase the  
speed of  
fabrication of  
mosaic

Expansion of  
assortment

Increase the  
profits

### OBJECTIVES

Complex  
patterns

24/7  
fabrication

no  
errors

Wide choice of  
colors

Production of  
equipment  
under the order

**RK-KMK-250**





# THE STRUCTURE OF THE COMPLEX

**System RK-KMK-250 consists of 3 main units:**

## 1. Robotic unit for mosaic fabrication

Robotic machine is a special complex, which consists of a specialized nodes, the system of sensors and controllers that manage the fabrication process of mosaic patterns.

## 2. Batcher orienting device

Batcher orienting device is a specific unit that allows to automatically load cassettes with specific color tiles. The tiles are loaded into batcher in bulk. Storage zone consists of automatic shelves for storage of full/empty cassettes and mosaic elements.

## 3. Automatic unit for operating supplies storage.

This is specific computerized shelf with tiles that need to be loaded into the batcher (similar to Pick-by-Light technology).

Mosaic fabrication unit is loaded by cassettes, each of which contains segments of specific color. Basic model supports up to 250 colors and shades.

Batcher orienting device is a specific unit that allows to automatically load cassettes with specific color tiles. The tiles are loaded into batcher in bulk. Storage zone consists of automatic shelves for storage of full/empty cassettes and mosaic elements.

The complex is integrated into a network that can analyze processes and place of requests for certain maintenance operations. The system does not require a high qualification level of staff. It requires only 1 operator. Tile cassette is an important part of the system. It is equipped with a unique ID that allows to control loading, batching and storing process for all cassettes.



*Im.1 Batcher orienting device*



*Im.2 Automatic unit for operating supplies storage*



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## FABRICATION CYCLE

0. Prior to fabrication of a new mosaic fragment the unit analyses cassettes and installed colors. It also indicates empty cassettes that need to be replaced.
1. The operator puts empty cassette into the orienting device. The unit analyzes cassette color code and indicates specific shelf with tiles that need to be loaded into the batcher (similar to Pick-by-Light technology)
2. After the cassette being loaded, the unit will indicate a specific installation cell.
3. The unit will create mosaic in “pad” forms. It will use empty forms and replace them by full ones.
4. The unit prints codes of mosaic fragment in general scheme.
5. After the fabrication of mosaic the operator puts adhesive film and places the mosaic into the storage unit. The procedure goes back to step 1.

### UNIT SPECS

#### **Mosaic fabrication speed:**

With tiles 1x1 cm and 8000 pcs/m<sup>2</sup> the speed will be around 1-1,2 m<sup>2</sup>/h.

#### **Staff – 1 person.**

The system supports up to **250 colors** and shades of tiles

Tiles specs differ for every unit and **start from 0.5 cm**

# RK-KMK-250

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THANK YOU FOR YOUR ATTENTION!  
WILL GLAD TO COOPERATE!