

The MK-Vacuum Casting System - Made in Germany -

The advantages of the system are:

- Solid construction, steel walls up to 20 mm and doors 40 mm
- Reusable cups and funnels
- Precise selection of pressure by „go-to“ function
- Automatic silicon degassing saves time
- Integrated modem for software updates and remote maintenance
- Easy program storage
- Optional electronic differential pressure system
- Large glass doors and transparent cups improve visibility
- Detailed documentation and training videos
- Chamber and components made in Germany

MK Technology's highly reliable vacuum casting systems are currently being used by the major car manufactures General Motors, DaimlerChrysler, Volkswagen.

The new electronically controlled MK-VACUUM CASTING SYSTEM provides a simple method of producing plastic prototypes without the need for an expensive steel tool. Starting with a pattern, produced using a rapid prototyping system or conventional means, a soft tool is created. Using this tool polyurethane plastic parts can be produced within a few hours.

MK-VACUUM CASTING RESINS are available that mimic the physical properties of almost all the materials used for producing plastic, rubber or glass parts. They are specifically designed to meet numerous requirements such as strength and temperature resistance while coping with complex parts and reproducing fine details, textures and colors.

MK-Vacuum Casting saves up to 90% of cost and time if compared to conventional techniques. It facilitates the easy and rapid production of prototypes in all shapes, textures and colors. These parts can be used to verify designs for mechanical testing, checking form fit and function and for customer evaluation. Thanks to the new technology of vacuum casting, the production of expensive steel molds, which often have to be modified several times, as well as lead times of many months now belong to the past.

The MK-VACUUM CASTING SYSTEM is one of the fastest, most precise and economical rapid prototyping-/rapid tooling-systems currently on the market.



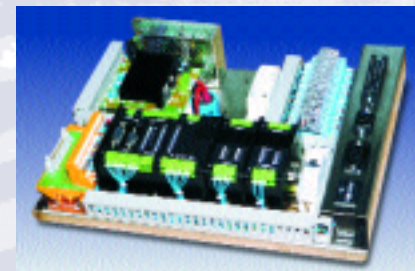
Reusable cups



Hot cup for wax cores



Combination of lift and roller conveyor



Programmable electronics



Panel, display and memo board



Detailed manuals and training videos

The MK-Vacuum Casting System in many different sizes



System 1 - One for all

Easy to operate and with reasonable maintenance costs, System 1 is our best selling unit. With more than a 1 Kg casting capacity this system has been specifically designed with mainstream rapid tooling applications in mind. It can also be equipped with an optional hot cup for producing wax patterns for investment casting.

MK-systems are represented in all five continents with 16 training and service centers World-Wide.

MK-Mini - Our best bargain

This system was designed especially for smaller companies, universities and training centers. By avoiding the use of electronics and other cosmetic items we have produced a compact highly quality unit at a very reasonable cost. This system comes with two ovens and a tool set for an unbeatable price.

Registered design, legal protection of utility models



MK Technology® delivers the whole spectrum of vacuum casting, from the low-priced model for beginners, the MK-Mini, up to the World's largest series-produced vacuum chamber, the System 3.

System 2 - The golden mean

Built according to the same principle as System 1, parts of more than twice the size can be cast in this chamber. For easy charging, the whole mixing-unit can be drawn out, and pouring- and mixing-speed are infinitely variable. For those who still want more there is System 2-XL, an extended version with three times the chamber volume of System 2 and for a maximal part-length of 2 meters.



System 3 - The allrounder

This system contains indeed two systems: two Systems 2, to be precise. Each of them can be operated autonomously and independently from the other one in order to produce parts up to the size of a TV-set housing. If one chamber alone is too small, both units can be combined to one big chamber just at the press of one button. In this double chamber, which is loaded from the side, parts of a length up to 2.5 meters and a maximal weight of 10 kg can be produced.



How the system works:

1. Mold making

• Preparation of the master model and adjustment inside the casting frame.



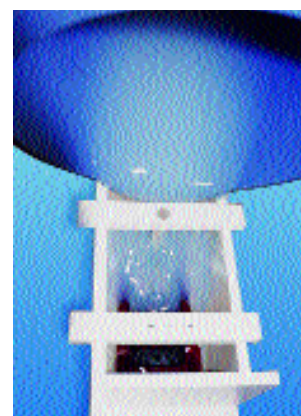
• Preparation of one or several gates and risers (depending on the shape and size of the model).



• Mixing of the two-component silicon and pre-evacuation in the vacuum chamber using the automatic Saw-Tooth function.



• Casting the silicon into the mold with subsequent evacuation in the vacuum chamber.



• After the mold has been cured in the oven it is opened with a scalpel and the master model is taken out.



2. Production of plastic parts

• Sealing of the silicon mold using tape or a stapler and tempering it in the oven.



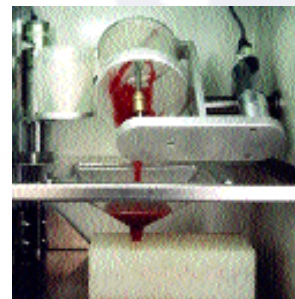
• Exact weighing of the resin's A- and B-component.



• Adjustment of the mold inside the chamber using the mold lift, and evacuation of the chamber.



• After it has been manually or automatically evacuated and mixed, the resin is cast into the silicon mold through the funnel.



• Subsequent flooding of the chamber.



• The silicon mold is taken out of the vacuum chamber and put into the oven for further hardening. After opening the mold, the final plastic part can be taken out.



Voilà: A perfect copy of the master model!

MK Technology® - Our philosophy

"I hold no reservations to openly admit and to bravely declare that never before have I seen, heard of, read about or seized by rational knowledge anything more wonderful in this field." This statement, issued in 1654 by a learned mathematician from Würzburg does not refer to one of our machines but to the world's very first vacuum machine.



Courtesy of Otto-von-Guericke-Gesellschaft e.V.

It was invented and built in Magdeburg by the councillor Otto von Guericke who was way ahead of his time. Today he is known for the brilliant ideas he had already then in the fields of vacuum technology, pneumatics, and electrostatics. His experiment with the two so-called Magdeburgian Hemispheres became famous world-wide.

That is why good ideas and products not only mean global and interdisciplinary thinking to us: they also represent the synthesis of knowledge and methods of the past with modern and innovative technologies of the present and the future.

MK Technology® - Development, production and training



Development



Production



Training

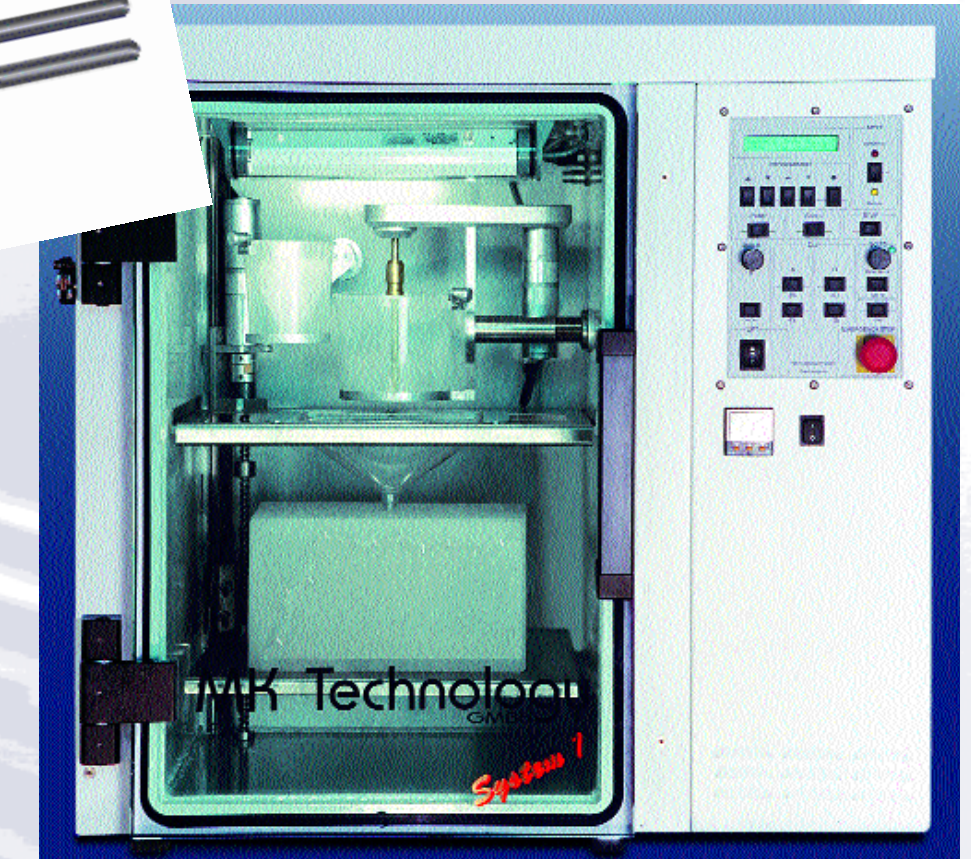
Creativity and imagination are what it is all about, and they are the starting point for the realisation of innovative and economical products. To see what is technically possible, to simulate mass-production, to take imaginary or real obstacles into consideration - that is what we want to enable people to do with our machines. For this reason, we strive with all our know-how and craftsmanship to construct an optimal implement for our customers.

All our systems are produced exclusively in Germany and built from components of first-class quality also „Made in Germany“. Besides their solid construction, their functionality and their easy operation they impress by their appealing overall design - it's a pleasure working with them!

Customers from all over the world trust in our technology today. An optimal service is guaranteed by a global dealer-network.



MK-VACUUM CASTING SYSTEM for Prototyping / Rapid Tooling and RTV



The innovative technology for making silicon molds and functional prototypes from a master model within only one day - at only a fraction of the usual costs

easy · fast · cost-saving

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