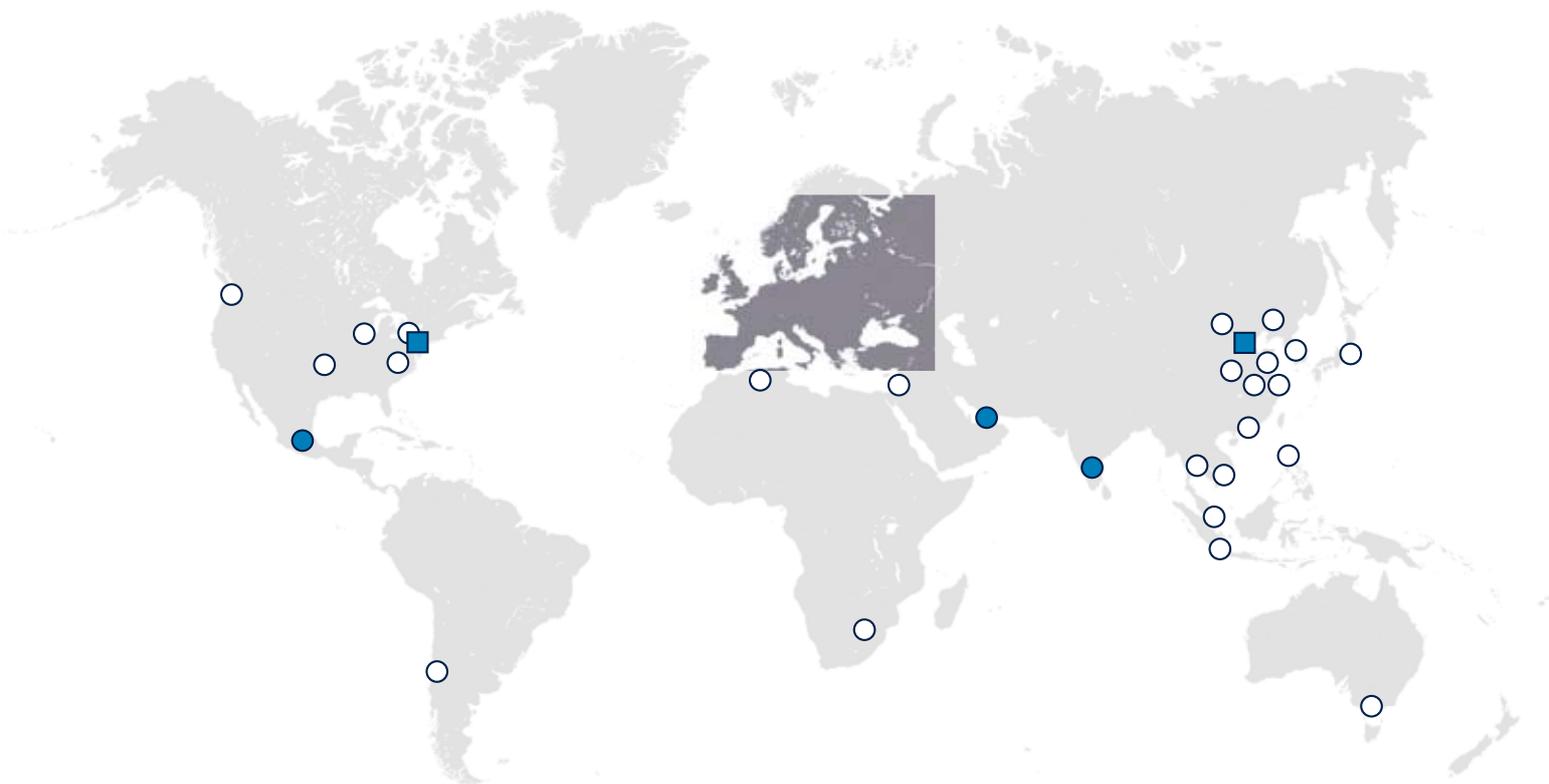




Production competence from one source  
**EMKA Feinguss d.o.o.**  
Mionica, Serbia

Managed in Germany



- Headquarters
- Production site
- Subsidiary
- Agencies/Sales office



# EMKA worldwide

The EMKA group is one of the worldwide leading manufacturers of lockings, hinges and seals for enclosures in the areas of industry, electronics and transport.

Currently, the overall range comprises more than 15,000 articles, which are developed, manufactured, refined and assembled at ten production sites in Germany, France, Great Britain, Spain, Italy, Bosnia and Herzegovina and Serbia.

With 1,450 employees, the company is represented in more than 50 countries worldwide.



## In-House production also in Serbia

After the foundation in 1962, the company moved to the current location in Mionica in 1980. In 2007, the site became part of the Cimos group under the name "Krušik precizni liv a.d.". Since its sale in 2015, the factory has been doing business under the name "EMKA Feinguss d.o.o." and has been a member of the EMKA group.

EMKA Feinguss is specialised in the making of precision cast parts of steel, stainless steel of all grades and alloys, as well as bronze. Modern technology enables the making of cast parts between 0.5 g to 10 kg.

Quarter turn stainless steel for  
hygienic areas



T-Handle



Compression latch



120° screw-on hinge



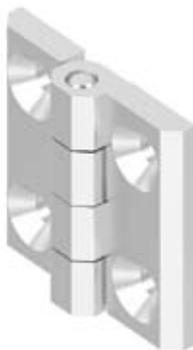
L-Handle



Swinghandle 1150



180° screw-on hinge



## Products for EMKA Beschlagteile

A lot of individual parts for locks and hinges of stainless steel for EMKA Beschlagteile are made by precision casting.

Precision casting has the following excellent benefits:

- High measuring precision
- Good surface quality
- Extreme resistance (e. g. against corrosion)
- Complex, sophisticated shapes can be realised
- Small wall thicknesses possible
- Flexibility regarding size and quantity of parts
- Better priced than turned and milled parts of solid material

#### Automotive industry



#### Electrical industry



#### Engineering



#### Agricultural machinery engineering



#### various precision casting parts



## Products according to customer drawings

EMKA Feinguss makes products to print for companies from the following sectors:

- Automotive industry
- Agricultural machines
- Hydraulic and pneumatics industry
- Industry of electric motors and electrical systems
- Industry of machine tools and accessories
- Industry of orthopedic appliances
- Metalworking industry

# Details about casting technology for precision casting

## 1. Wax injection process

Wax models are created as replication of the cast part. These models are injected in aluminium or steel tools.



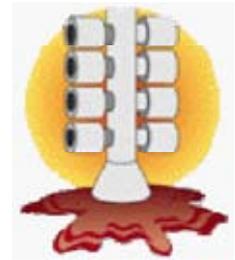
## 2. Building a wax tree

The wax models are fixed on a central trunk which is called wax tree.



## 3. Making the casting mould

The casting mould is made by immersing mutually into a ceramic suspension and very fine sand. During this process up to eight layers are built.



## 4. Removal of the wax

As soon as the casting mould is dry, the wax models can be melted off at 150 °C. Afterwards the mould is fired at 900 °C to 1,200 °C.

## 5. Casting

The casting moulds are placed in a box and covered with dry quartz sand. Afterwards the melted metal is filled from above into the casting mould (ceramic tree).



## 6. Breaking of the casting mould (ceramic tree)

As soon as the metal is cold and hard, the ceramic tree will be broken with the help of vibrations or water spray jets.



## 7. Detaching of the single parts

The parts are sawed or cut with water jet cutting from the central casting trunk.



## 8. Finished casting parts

The casting parts will be finished after further small reprocessing steps.



# Technical details

Part weight / size:	from 0.5 g to 10 kg and a length to max. 300 mm	Surface quality:	to N8 (Rz = 16 – 25 µm) without rework
Material:	steel and stainless steel in all qualities and alloys as well as bronze	Outer edges:	to r = 0.25 mm
Tolerances:	according to VDG P690 D2	Inside corners:	to r = 0.25 mm
		Surface treatment:	electrolytic polishing, passivation, rough surface, mirror polished surface, brushed surface, galvanized surface, coated surface.



## Quality assurance

Our chemical and metrology lab has modern measuring and testing equipment and therefore enables a comprehensive and complete check of the cast parts regarding the chemical composition, the homogeneity structure, the mechanical properties and the dimensional precision.

These analyses are provided for by spectroscopy equipment, x-ray, penetrants, optical microscope, optical comparators, various measuring devices and other necessary testing equipment.

EMKA Feinguss is certified according to ISO 9001.

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