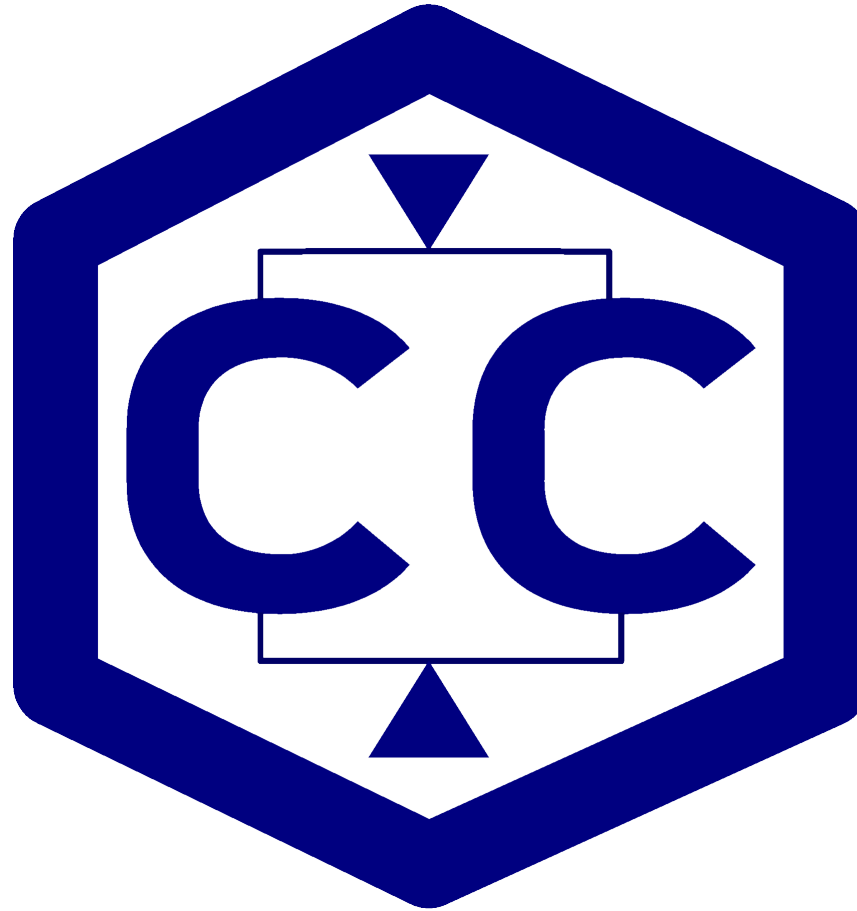




cast concept

Aluminiumdruckguss | Kunststoffspritzguss | Werkzeugbau



Mouldmaking for the production of moulds according to customer specifications

Production of components in

- plastic injection moulding
- die cast for
 - aluminum
 - zinc
 - magnesium
- investment casting
- Metal injection moulding
- Drop forging

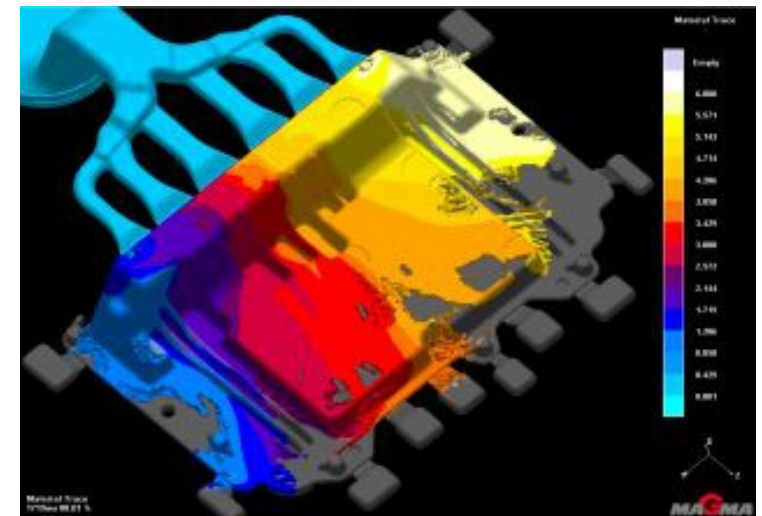
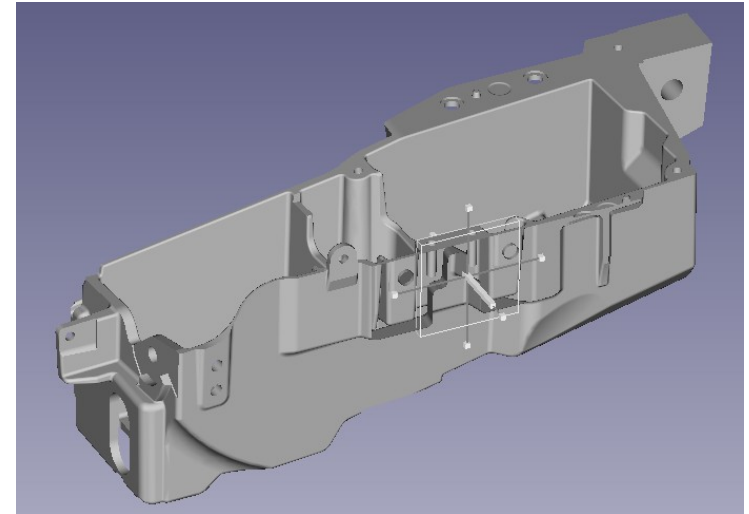
Main industries

- Elektrowerkzeugbau
- Elektronik
- Maschinenbau
- Anlagentechnik



Engineering / Design

- Design of the moulds according to customer specifications
- Close cooperation with the customer on the design of the component and the shape
- Simulation with MAGMASOFT®
- CAD systems: AutoCAD, UG, Pro-E
- DFM analysis





Mould Manufacturing

16 CAM systems

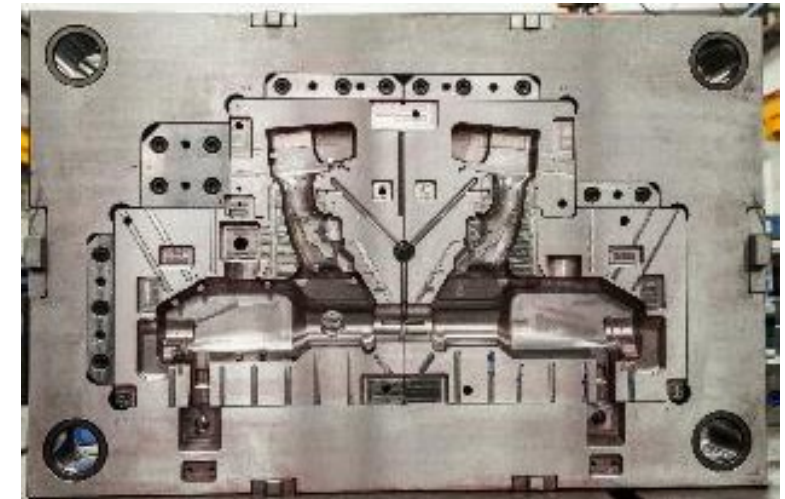
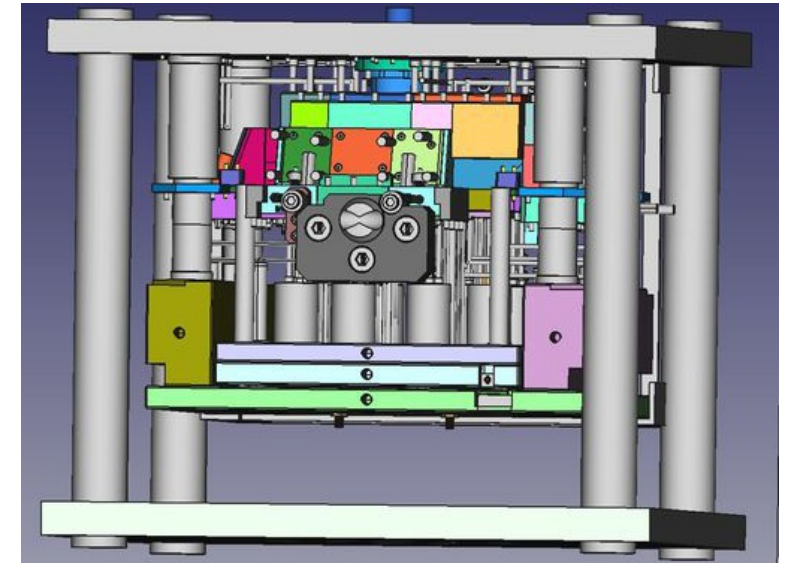
32 spark erosion systems and wire cut systems

20 CNC milling centers

Production capacity of mould making per year:

Metal casting: 600 tools

Injection molding: 900 tools





Plastic Injection Moulding

- Processing of all common and injection-mouldable materials
- Overmoulding of metallic or textile inserts
- Injection molding to connect different materials or colors
- Two-component injection molding
- In-mold assembly (IMA)

Machinery in operation:

- 229 injection molding machines with clamping forces from 40t – 1,200t
- 32 injection molding machines for 2K injection molding with clamping forces from 140t – 400t



Overview:

	lot size [pcs.]	locking force [kN]	dimensions [mm]	weight [kg]
Injection moulding	500 - 50.000	400 - 12.000	10 * 10 * 10 - 1.200 * 800 * 400	0,002 - 20
2K injection moulding	500 - 50.000	400 - 4.000	20 * 20 * 20 - 800 * 400 * 400	0,005 - 10
Multi-component injection moulding	1.000 - 50.000	500 - 4.000	20 * 20 * 20 - 500 * 400 * 250	0,005 - 8
blow mould	500 - 50.000		100 * 100 * 100 - 2.000 * 1.000 * 400	
thermal deep drawing	500 - 50.000		100 * 50 * 5 - 2.000 * 1.000 * 250	



Examples of Injection Moulding



Handle and slewing ring of
Angle grinder Milwaukee AGVKB24



Finishing

- Laser marking
- Spray painting
- Soft-touch painting
- Pad printing
- screen printing
- Hot foil stamping
- Ultrasonic welding
- Module assembly





Metal die cast

An extensive range of machines is available for the casting process for a wide range of options.

Our mainly used die-cast materials:

- aluminum
- zinc
- magnesium

Depending on the requirements of the component (temperature range, strength, impact strength, etc.), suitable alloys are available for each material group.



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Machinery in operation

Aluminium

106 cold chamber die casting machines
locking forces from 140t - 1,400t

Zinc

17 hot chamber die casting machines
locking forces from 15 t to 200 t

Magnesium

18 hot chamber die casting machines
locking forces from 200 t to 800 t



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Dimensions of components in metal die cast:

Material	process	lot size [pcs.]	locking force [kN]	dimensions [mm]	weight [kg]
Aluminium	cold chamber	500 - 50.000	1.400 - 14.000	15 * 15 * 15 - 1.500 * 400 * 200	0,002 - 40
Zinc	hot chamber	500 - 50.000	150 - 2.000	10 * 10 * 10 - 600 * 400 * 280	0,005 - 10
Magensium	hot chamber	500 - 50.000	2.000 - 8.000	10 * 10 * 10 - 1.000 * 600 * 400	0,005 - 8



Examples of metal die cast





Investment casting (lost wax casting)

In the investment casting sector, we process all castable stainless, tool and carbon steels.

This process is being applied whenever certain materials or geometries are not suitable for die cast process.

The advantages of the investment casting process are the highest load capacities of the components and low tool costs. This also makes this process interesting for small to medium-sized quantities.



Investment casting: component dimensions and examples

	lot size [pcs.]	dimensions [mm]	weight [kg]
investment casting	500 - 50.000	10 * 10 * 10 - 1.200 * 650 * 400	0,002 - 80

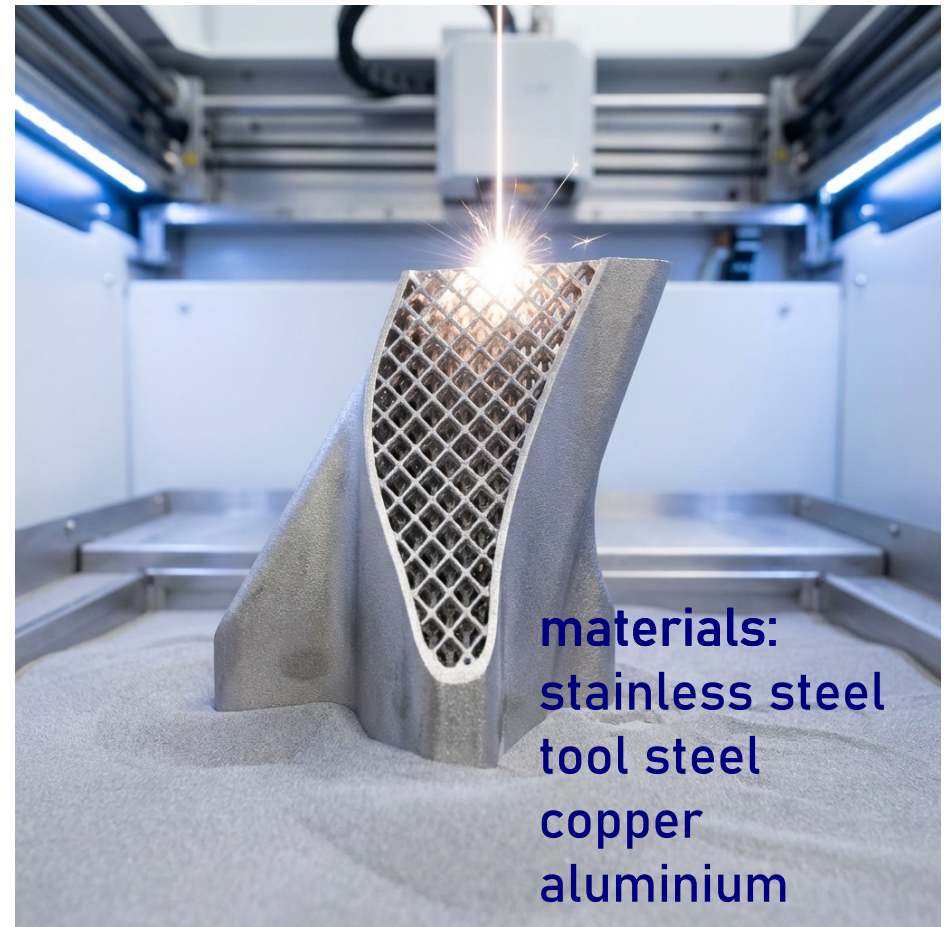




Additive Moulding: Laser deposition welding

Ideal for prototyping phases and very small production runs:
Laser deposition welding replicates the exact component geometry.
Consequently, the component possesses the same properties as the mass production part as early as the design phase—without the need to immediately manufacture the die-casting tool.

This saves time and money and reduces modifications to the production tooling.



materials:
stainless steel
tool steel
copper
aluminium



Finishing of metal parts

Threads, flat surfaces, fits, evenness, particularly low surface roughness?

Then the final machining takes place on CNC turning centers or on milling centers with 3 to 5 axes.



Hardenable materials are oven-hardened or inductively hardened to the required degree of hardness according to customer specifications.



An optical and / or anti-corrosion surface treatment can be provided on request.



Measuring and Testing

- Optical Emission spectrometry (OES)
- X-ray test (porosity + layer thicknesses)
- Coordinate measurement
- Profile projection
- Hardness test
- Spectrophotometry





Certification

ZERTIFIKAT

DIN EN ISO 9001



Die IMC GmbH bescheinigt, dass das Unternehmen

cast concept

am Standort:

**Marktplatz 5/2
D – 73728 Esslingen**

mit dem Geltungsbereich:

Herstellung von Metallerzeugnissen

ein Managementsystem entsprechend der Norm DIN EN ISO 9001:2015
eingeführt hat und wirksam anwendet.

Im Rahmen des Zertifizierungsverfahrens Nr.: 73728-0838-QM wurde der
Nachweis der regelkonformen Anwendung erbracht.

Die Wirksamkeit dieser Zertifizierung wird regelmäßig überwacht.

Zertifikats-Nr.:	73728-0838-QM
Gültig ab:	11.12.2024
Gültig bis:	10.12.2027

IMC GmbH
Am Kaiserkal 28
20457 Hamburg


Leiter der Zertifizierungsstelle





And what's next? A new project?

We are always at your disposal for further information
and we are looking forward to your inquiry!

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