

## Graphite Mold For Die Casting

### Description of Graphite Mold

Continuous- casting graphite molds are designed for continuous casting of copper, platinum, gold, silver and other non- ferrous metals, as well as steel, stainless steel and related alloys. They feature excellent thermal conductivity, superior high- temperature self- lubrication, good wear resistance and high mechanical strength.

Graphite continuous- casting molds are classified by casting type into **horizontal continuous- casting molds** and **vertical (up- drawing) continuous- casting molds**. By casting material, they are categorized as below:

1. Brass continuous- casting molds
2. Red copper (pure copper) continuous- casting molds
3. Continuous- casting molds for gold, silver, platinum and other jewelry- grade metals
4. Continuous- casting molds for steel and stainless steel

### Advantages

1. Fabricated from high- purity graphite, preventing impurity contamination of molten metals or glass.
2. Premium- grade graphite selected based on abundant on- site engineering experience, combined with anti- oxidation treatment, to achieve extended service life for graphite ingot molds.
3. Stable- quality graphite raw material, with strict quality control covering both graphite base material and precision machining processes.
4. Ten- year- plus experience focused on improving the service durability of graphite continuous- casting molds.
5. Precision CNC machining with full dimensional inspection to guarantee dimensional accuracy.

### Technical index:

Mold graphite technical data

| Index                | Units                    | FSM-1 | FSM-2 | FSMK-3 | FSMK-5 | FSMK-5S | FSMW-4 | FSMW-5 |
|----------------------|--------------------------|-------|-------|--------|--------|---------|--------|--------|
| Bulk density         | $\geq$ g/cm <sup>3</sup> | 1.6   | 1.7   | 1.68   | 1.8    | 1.85    | 1.75   | 1.85   |
| Electric resistivity | $\mu \Omega \cdot m$     | 8     | 7.5   | 9-13   | 8-10   | 8-10    | 8.5    | 8.5    |
| Compressive strength | Mpa                      | 28    | 36    | 45     | 70     | 80      | 65     | 85     |
| Flexural strength    | Mpa                      | 14    | 18    | 20     | 35     | 40      | 38     | 46     |
| Shore hardness       |                          | 25    | 30    | 35     | 48     | 55      | 42     | 48     |

|                                        |                                 |               |              |             |         |         |             |         |
|----------------------------------------|---------------------------------|---------------|--------------|-------------|---------|---------|-------------|---------|
| Ash content/<br>purification           | ppm                             | 2000/<br>-    | 2000/-       | 1000/5<br>0 | 1000/50 | 1000/50 | 1000/5<br>0 | 1000/50 |
| Average<br>granularity                 | μ m                             | 2000,<br>4000 | 800,200<br>0 | 15-45       | 15-45   | 15-45   | 14-45       | 14-45   |
| Coefficient of<br>thermal<br>expansion | ×<br>$10^{-6}/^{\circ}\text{C}$ | 5.8           | 5.7          | 5.7         | 4.9     | 4.8     | 5.46        | 4.75    |
| Young's<br>modulus                     | Gpa                             | 7             | 8            | 8           | 9.5     | 10      | 9           | 11.8    |

| Product Name                         | Industry    | Application                                                                                                                                             |
|--------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Crucible, Boat, Dish, etc.           | Metallurgy  | Melting, refining and analysis                                                                                                                          |
| Dies, Molds, Ingot<br>Chassis, etc.  |             | EDM graphite electrodes, semiconductor<br>manufacturing, iron, steel and nonferrous<br>metal making, continuous casting, metallurgy<br>pressing machine |
| Graphite Roller, etc.                |             | Heat treatment of steel plate in furnace                                                                                                                |
| Conduit, Skateboard, etc.            |             | Aluminum molding                                                                                                                                        |
| Graphite Pipe                        |             | Guard pipe for measuring<br>temperature, blowpipe, etc                                                                                                  |
| Graphite Block                       |             | Masonry furnace and other heat resistance<br>material                                                                                                   |
| Chemical Equipment                   | Chemistry   | Heat exchanger, reaction tower, distillation<br>columns, absorption equipment, centrifugal<br>pumps, etc                                                |
| Electrolytic Plate                   |             | Salt solution and baking molten salt<br>electrolyte                                                                                                     |
| Electrolytic Mercury                 |             | NaCl electrolyte                                                                                                                                        |
| Grounded Anode                       |             | Electrical anticorrosion                                                                                                                                |
| Motor Brush                          | Electricity | Commutator, slipping ring                                                                                                                               |
| Current Collector                    |             | Skate, slide, trolley                                                                                                                                   |
| Contact                              |             | Switches, relays                                                                                                                                        |
| Mercury Ferry And<br>Electronic Pipe | Electronics | Anode, grid pole, repeller pole, ignition pole<br>of the Mercury rectifier and anode, grid<br>electrode                                                 |
| Graphite Bearing                     | Machinery   | High temperature resistance sliding bearing                                                                                                             |
| Sealing Element                      |             | Sealing ring, stuffing box seal, packing seal                                                                                                           |
| Product Element                      |             | Braking in plane and vehicle                                                                                                                            |

## **FAQ**

### **1. When can I get the price?**

We normally provide formal quotations within 24 hours after receiving your detailed requirements, including size, quantity and other specifications. For urgent inquiries, you may contact us by phone directly.

### **2. Do you provide samples?**

Yes, we offer samples for quality inspection. The sample lead time is about 7 - 10 days.

### **3. What is the mass production lead time?**

Mass production takes 7 - 12 days according to order quantity. For graphite products that require a dual-use item license, the licensing process takes around 45 working days.

### **4. What are your delivery terms?**

We support FOB, CFR, CIF, EXW and other international trade terms. Customers can choose the most suitable shipping method. Air freight and express delivery are also available.

### **5. What about product packaging?**

Standard packaging is customized wooden cases. Custom packaging is acceptable according to customer requirements.

We sincerely look forward to establishing long-term cooperation with you!